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Alaska Pulp Corporation Long-Term Timber Sale Contract

Southeast Chichagof Project Area
Final Environmental Impact Statement

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Appendix A

Reasons for Scheduling the Environmental Analysis of the Southeast Chicagof Project Area

Reasons For Scheduling The Environmental Analysis Of The Southeast Chichagof Project Area

APC Long-term Timber Sale Contract Offerings 1993-98

This appendix explains why the Southeast Chichagof Project Area is scheduled for environmental analysis at this time.

Summary

Reasons for scheduling the Southeast Chichagof Project Area at this time, for detailed consideration of timber harvest under the Alaska Pulp Corporation Long-term Timber Sale Contract, may be summarized as follows:

1. The Southeast Chichagof Project Area is within the designated sale area for the Alaska Pulp Corporation Long-term Timber Sale Contract, and contains a sufficient amount of harvestable timber volume designated as LUD III or IV, and therefore appropriate for harvest under the Tongass National Forest Land Management Plan (TLMP). Available information indicates harvest of the amount of timber being considered for this project can occur consistent with Forest Plan Standards and Guidelines and other requirements for resource protection. Consideration of areas outside the designated sale area at this time would not meet Alaska Pulp Corporation Contract requirements and is otherwise not necessary or reasonable.
2. Other areas with available timber inside the designated sale area will be necessary for harvest within the remainder of the Alaska Pulp Corporation Contract term (by 2011) in order to meet contract volume requirements. Effects on subsistence resources are projected to differ little according to which sequence these areas are subjected to harvest. Harvesting other areas on the Tongass National Forest with available timber is expected to have similar potential effects on resources, including those used for subsistence because of widespread distribution of subsistence use and other factors. Harvest of these other areas is foreseeable, in any case, over the forest planning horizon under either the existing or proposed revised Forest Plan.
3. Providing substantially less timber volume than required by the Alaska Pulp Corporation Contract in order to avoid harvest in the Southeast Chichagof Project Area or other project areas would not meet contract requirements and is otherwise not necessary or reasonable.
4. It is reasonable to schedule harvest in the Southeast Chichagof Project Area at present rather than other areas in terms of previous harvest entry and access, level of controversy over subsistence and other effects, and the ability to complete the National Environmental Policy Act (NEPA) process and make timber available to meet contract requirements by the time it is reasonably necessary to do so. Other areas that are reasonable to consider for harvest in the near future are the subject of other project EISs that are currently ongoing or scheduled to begin soon.

More detail regarding the scheduling of the environmental analysis for the Southeast Chichagof Project Area is presented in this appendix in three subsections:

- Alaska Pulp Corporation Contract Requirements
- Tongass Land Management Plan
- Forest Plan Implementation

Alaska Pulp Corporation Contract Requirements

Contract Background

In 1956, the Forest Service and Alaska Pulp Corporation (APC) entered into a contract for sale and harvest of timber in Southeast Alaska for a 50-year period beginning in 1961 and ending in 2011. A primary function of this long-term contract was to "establish a new industrial enterprise which will be an important and significant step in the industrial development of Alaska" (Forest Service 1956).

The current management situation consists of a valid contract between the Forest Service and APC, contract number 12-11-010-1545. This contract bestows rights and obligations on both parties. One obligation for the Forest Service is to provide the agreed upon volume from an identified contract sale area on the Tongass National Forest. The present volume obligation amounts to a minimum "Current Timber Supply" of 240 million board feet specified for harvest beyond what has already been harvested. The Forest Service has until the end of 1995 to increase this supply to at least 360 million board feet.

"Current Timber Supply" is defined in the contract generally as timber which the Forest Service has specified according to Forest Service planning procedures and for which the NEPA process has been completed. The Forest Service specifies timber through approving in writing a timber "Offering" under the contract, comparable to an independent timber sale. This approval in writing is represented by issuance of an "A Division" contract document for the Offering. An EIS such as the Southeast Chichagof Project Area EIS may cover one or up to several such Offerings, which may be specified by the Forest Service and therefore added to the contract "Current Timber Supply" concurrently or sequentially after issuance of the Record of Decision for the Project. Generally, layout on the ground of roads and harvest units selected in the Record of Decision (ROD) will be completed for each Offering prior to issuance of the "A Division" approval document. (See APC Contract, Section B0.6, B0.62 and B0.65).

The Forest Service Timber Sale Preparation Handbook (FSH 2409.18 Chapter 10) details the process utilized to prepare timber sales. This process also guides the preparation of timber Offerings under the APC Contract. The timber sale preparation process is summarized below. Included in brackets is information describing modifications to the process specific to the APC Contract. The Handbook states:

The timber sale preparation process begins with the identification of the sale area and ends with the award of the timber sale contract [as described above, the process for the APC Contract ends with the issuance of an "A Division" contract document for the Offering]. These activities pass through specific stages, called "gates", each of which requires specific outputs before proceeding to the next gate. . . Following are descriptions of work processes at each gate.

Gate 1. Begin sale preparation activities with scoping or position statement development. Identify the purpose and need for the project, public issues, interested outside parties, management issues, resource opportunities in the sale area, a range of possible volume targets, and initial transportation system needs. . .

Gate 2. During the sale area design (environmental analysis) phase, develop alternative designs and analyze them for environmental effects. Concurrently, develop an analysis file to store the information that is gathered. Once a course of action is selected, develop a sale implementation plan that provides detailed instructions for field layout of all sale elements. The end product of the sale area design phase is the selection of the preferred alternative and signature of the decision notice by the official authorized to approve the project. . .

Gate 3. Activities leading to sale plan implementation include the data gathering and the on-the-ground marking, designating, and delineating needed to properly support the appraisal, the preparation of the contract, and post-award sale administration efforts. The sale passes through gate 3 when the field work is completed. . .

Gate 4. After gathering all necessary engineering design work, cruise (volume) information, logging costs, environmental protection costs, and other elements of the timber appraisal. . . [a final timber appraisal is prepared for the offering(s) and an "A Division" contract document is issued].

Contract provisions require APC to harvest timber, construct and operate a mill for primary manufacture and to recruit labor from residents of Southeast Alaska (APC Contract section B0.1 - B0.13). To fulfill this obligation APC operates two mills in southeast Alaska; a pulp mill in Sitka and a sawmill in Wrangell.

Why Areas Outside The Contract Boundary Are Not Considered In Detail

Since authorization of the APC contract in 1956, several laws have changed the land base from which the authorized timber volume could be removed. The Alaska Native Claims Settlement Act (ANCSA) authorized substitution to replace areas selected by the Native Corporations. The Alaska National Interest Lands Conservation Act (ANILCA) authorized substitution for areas designated by Congress as Wilderness in that statute which were in the primary sale area. The substitutions for Native selections and Wilderness selections were accomplished prior to the Southeast Chichagof Project Area environmental analysis process.

Section B0.3 of the contract, *Sale Area*, states in part:

The sale area is comprised of Allotments B and H, the Contingency Area in Allotment C, and to the extent that the Forest Service may designate additional cutting areas in Allotment A-1 under the terms of this contract and to no further extent, such areas in Allotment A-1 as may be designated. . . It is agreed that cutting shall be confined within the boundaries of pulp timber Allotments B and H as shown on said map unless the quantity of timber available for cutting thereon under the terms of this contract is less than 4,974,700,000 board feet. . . In event the quantity of timber available for cutting within said pulp timber Allotments B and H. . . during the period of this contract is less than 4,974,700,000 board feet, the Forest Service shall designate additional cutting areas within that portion of pulp timber Allotment

C designated on Map A as "Contingency Area" to bring the total up to 4,974,700,000 board feet; or in lieu of designating such additional cutting areas within said portion of pulp timber Allotment C, the Forest Service may, at its discretion, designate additional cutting areas within pulp timber Allotment A-1 containing timber not then required to satisfy other timber sale contract obligations of the United States to bring the total up to 4,974,700,000 board feet. . .

Section B0.61 of the Contract, *Timber Offering Schedule*, provides in part: "To the extent authorized by law, Offering Areas may be identified for harvest outside the sale area, as needed to meet sale volume requirements."

The Southeast Chichagof Project Area lies within Allotments B and A-1 described in contract section B0.3. Current data indicates that there remains sufficient timber available within the designated sale area, including areas A-1 and C described above, to provide the remaining unharvested portion of the total contract volume of 4,974,700,000 feet, consistent with Forest Plan Standards and Guidelines and other requirements for environmental protection. The most recent Supplement to the Draft EIS for the Tongass Land Management Revision (TLMP SDEIS), which considers reductions in timber base due to the Tongass Timber Reform Act (TTRA), indicates this for the "current direction" alternative. For the current preferred alternative for the TLMP revision, the TLMP SDEIS indicates that there is at present easily enough available volume within the designated sale area to meet contract volume requirements for the next several years at least, while still meeting all constraints associated with the alternative. This evaluation is incorporated by reference and further described in the last section in this Appendix, *Forest Plan Implementation*.

Therefore, providing volume outside of the sale area is not necessary at this time under the terms of the contract. Modifying the contract does not meet the purpose and need for the project. Although APC has indicated that the Forest Service has the discretion to consider obtaining volume from outside the designated sale area, it has not expressed an interest in modifying the contract to obtain timber from other areas in lieu of the Southeast Chichagof Project Area. The criteria for modification in 36 CFR 223.112,113 have not been met, considering the information in the TLMP SDEIS, and this EIS. Congress in enacting the Tongass Timber Reform Act declined to modify the contract sale area, and by directing in section 301(e) of the statute that the Secretary of Agriculture report to Congress on the effects of eliminating the sale area, indicated an intent to reserve this decision to the legislature.

Why Providing Less Than The Contract Volume Was Not Considered In Detail

Congress in section 301(e) of the TTRA also indicated its intent to reserve to itself the question of providing less than the contract volume obligation to APC. Providing less than the contract volume would not meet the purpose and need for the Southeast Chichagof Project. The Forest Service can expect a large monetary claim from APC for not meeting contract volume obligations, for which there is no current funding. To the contrary, recent federal appropriations legislation has dedicated additional money to providing additional timber offerings to APC and other Tongass National Forest timber purchasers. Volume from independent timber sales or sources outside the Tongass National Forest do not fulfill APC Contract requirements. In any case, there is not sufficient projected volume from other sources to meet APC volume requirements.

Logs from Native corporation lands cannot substantially meet the total needs of APC. Owners of private timberland are able to sell their sawlogs on the export market for much higher prices than can be paid by local manufacturing. APC is not prohibited under the Contract from purchasing timber from Native Corporations or other sources, subject to

the requirement that, "... at least 70 percent of the log requirements of the pulp mill shall be cut from the areas included in this contract" (APC contract B0.53). There are no provisions in the Contract to offset such purchases by adjusting the Contract timber volume. Harvest from Native Corporation lands is decreasing, reducing potential pulp as well as sawlog availability from these lands (TLMP SDEIS page 3-339).

Canadian timber has been mentioned in the past as a source of supply for Southeast mills. Southeast Alaska pulp mills have purchased pulp logs from British Columbia (BC) in the past. However, the political and economic situation in British Columbia has changed to decrease the likelihood of substantial supply from this source. The June 1988 issue of British Columbia Lumberman, page W14, states that a substantial increase in demand for BC forest products is expected to decrease log exports. The Forest Minister stated: "Our main objective is to use BC timber to manufacture wood products in this province." It has been more recently stated that British Columbia is considering prohibiting log exports and is facing increased environmental pressures (TLMP SDEIS, page 3-339).

Trying to meet the long-term volume contractual obligations from outside the long-term timber sale boundaries would decrease the availability of timber for the independent timber sale program, including the Small Business Set Aside Program; obtaining a substantial portion of long-term contract timber from outside the designated sale areas would probably decrease the independent sale program by an equivalent amount under the current TLMP allowable sale quantity. Under the current Plan, an annual average of 271 MMBF net sawlog of the ASQ is needed to meet the long-term sale requirements, leaving an annual average of 179 MMBF net sawlog for the independent program.

The TLMP SDEIS (table 3-134, page 3-368) shows for the current Plan as amended by the TTRA (Alternative C) the contribution to ASQ net sawlog (MMBF) by Allotment Area. Areas of Allotment A and C not currently part of the APC contract area contribute 101 MMBF annual average (22%) to the ASQ. Designating any part of this volume for the long-term sale would directly reduce the portion of the ASQ available for the independent program. The timber volume included in the action alternatives in the Southeast Chichagof Project Area EIS and scheduled from this area in the TLMP for the long-term contract is greater than the current yearly size of the entire Small Business Administration timber sale program agreed to with the SBA, 80 MMBF. Section 105 of the Tongass Timber Reform Act reflects Congressional intent that the SBA program continue.

Lack of an adequate timber supply to support these programs could affect the existing mill infrastructures and employment. The TLMP SDEIS (table 3-118, page 3-337) shows that lumber mill capacity for independent operators is about 220 MMBF annually (380 MMBF minus the Wrangell and KPC Sawmills). During good market conditions, the short term sales program has purchased up to 174 MMBF and harvested up to 149 MMBF annually which translates into about 67 percent of the mill capacity (TLMP SDEIS, table 3-114, page 3-325). Therefore, under good market conditions, the existing infrastructure can absorb the available supply. Elimination of short term sales under the independent and set-aside programs would translate into a loss of between 815 and 1144 timber-related jobs (TLMP SDEIS page 3-370, 3-610).

Current Timber Supply And Contract Volume Needs

This section provides an updated look at the long-term contract timber volume projected to be available to APC. It includes a tentative schedule projecting how volume is to be made available to meet contract obligations for a current timber supply of 240 MMBF for the next four years and a minimum 360 MMBF supply by December 31, 1995 (Contract Section B0.65).

Generally, there is a need for approximately 2,447 million board feet of timber volume remaining over the life of the APC contract. This equates to an average of approximately 129 million board feet per year, leaving the remaining 6 months (January through June of 2011) for final cleanup and closing (Morrison 1992). Table 1 shows the volume available as of January 1, 1992 and displays how timber volume would be scheduled through 1996 to help meet current timber supply needs.

Table 1
Current Timber Supply and Projected Harvest to 1996.¹

Project Area and Offerings	1/92 Spec. Vol. ²	1992 Harv.	1/93 Spec. Vol. ²	1993 Harv.	1/94 Spec. Vol. ²	1994 Harv.	1/95 Spec. Vol. ²	1995 Harv.	1/96 Spec. Vol. ²
1981-86 & 1986-90									
(1) 8 Fathom	65	8	57	12	45	13	32	32	0
(2) Upper Game	81	30	51	26	25	25	0		
(3) Freshwater	34	20	14	14	0				
(4) Corner Bay	29	20	9	9	0				
(5) Sitkoh Bay	24	15	9	9	0				
(6) Rowan Bay	37	37	0						
Kelp Bay									
(1) Appleton Cove			30	6	24	15	9	9	0
(2) Hanus Bay			39	6	33	20	13	13	0
(3) Saook Bay					48	0	48	6	42
N&E Kuiu (140)									
(1) Offering (37)			37	37	0				
(2) Offering (37)					37	37	0		
(3) Offering (37)							37	37	0
(4) Offering (29)									29
SE Chichagof (127)									
(1) Offering (55)				11	44	20	24	20	4
(2) Offering (72)							72	6	66
Ushk Bay (89)							89	7	82
Eight Fathom (127)									127
N&E Kuiu 95+ (140)									
(1) Offering (37)									37
Total Volume	270	130	246	130	256	130	324	130	387

Numbers shown in parentheses indicate EISs in progress.

¹ All volume figures shown include sawlog and utility volume and are in MMBF.

² Estimated volume specified for harvest by January 1st of the indicated year. The Environmental Impact Statement and Record of Decision are planned for issuance up to 18 months in advance of specifying timber offerings to allow for final layout and survey of harvest units and roads.

The Southeast Chichagof Project Area EIS offers volume to help meet APC contract obligations starting in 1993. This amount of volume is reasonably necessary to help maintain a current timber supply of at least 240 million board feet of timber. Based on the scenario shown in table 1, operations in Southeast Chichagof Project Area could begin in 1993 with all operations substantially complete by 1998.

Tongass Land Management Plan

TLMP As Amended Winter 1985-86

Chapter 1 of this EIS includes an explanation of how this project relates to the Tongass Land Management Plan. That section describes the Land Use Designations (LUDs) which allocate land areas to different types of management. Chapter 1 also explains that these LUDs were assigned to land areas known as Value Comparison Units (VCUs), and that one or more contiguous VCUs were formed into Management Areas (MAs). This section also describes the management emphasis for the Management Areas likely to be affected by the Southeast Chichagof Project.

The Tongass Land Management Plan, As Amended Winter 1985-1986, not only detailed Management Direction/Emphasis for each Management Area, it also scheduled specific Management Activities for specific time periods. In particular it scheduled timber sale preparation activities for 1985-89 and 1990-94. Table 2 displays the Management Areas scheduled for timber sale preparation during 1990-94.

Table 2
TLMP, As Amended Winter 1985-86, Activity Schedule

Management Area	Name	Years Scheduled	Activity Scheduled
C27	Mud Bay	90-94	Timber Sale Prep
C28	Neka	90-94	Timber Sale Prep
C30	Freshwater	90-94	Timber Sale Prep
C31	Whitestone	90-94	Timber Sale Prep
C32	Tenakee	90-94	Timber Sale Prep
C34	Crab Bay	90-94	Timber Sale Prep
C37	Corner Bay	90-94	Timber Sale Prep
C39	Ushk Bay	90-94	Timber Sale Prep
C40	Neva-Olga St.	90-94	Timber Sale Prep
C41	Rodman Bay	90-94	Timber Sale Prep
C43	Kelp Bay	90-94	Timber Sale Prep
C44	Upper Kruzof	90-94	Timber Sale Prep
C45	Mt. Edgecumbe	90-94	Timber Sale Prep
C48	Silver Bay	90-94	Timber Sale Prep

The Allowable Sale Quantity (ASQ), calculated in TLMP and used in Congressional deliberations and decisions on ANILCA, assumed harvest in all LUD III and LUD IV VCUs, in compliance with the Southeast Area Guide, on a three entry, 100 year rotation. Some selected areas were scheduled for 4 entries in 120 years (LUD IV) and 6 entries in 200 years (LUD III) for visual considerations. A three entry rotation assumes the first entry will be made within 30 to 40 years. If areas are not entered, and the ASQ is harvested, other areas will have to receive a heavier entry, resulting in a pattern of high percentage first entries being established, and therefore creating conditions under which the three-entry rotation may not be achievable.

The TLMP as amended also scheduled as anticipated management outputs from the Chatham Area timber volume ranging from 70 million to 120.6 million annually (Tongass Land Management Plan Amended Winter 1985-86, page 5).

Supplemental TLMP Revision Draft EIS (TLMP SDEIS)

1. Sufficient Volume for APC Contract Needs in TLMP SDEIS.

The TLMP SDEIS Chapter 3 section on timber (pages 3-354 and 355) provides the following summary statements in terms of the timber supply and the long-term timber sale programs.

If utility volume is included, Alternatives B, C, D, and P would meet or exceed the projected demand for National Forest timber (400 MMBF). Alternative A would provide 89 percent of the projected demand.

All of the first-decade Allowable Sale Quantity (ASQ, sawlog) in Alternative A would be needed to satisfy the long-term contracts; Alternative B would need 82 percent of the ASQ; Alternative C, 69 percent; Alternative D, 66 percent; and Alternative P, 75 percent.

These statements show that timber supply exceeds the level which is required to satisfy the long-term timber sale contracts (both APC and KPC). The data to support these statements is displayed in table 3-127 on page 3-355 and table 3-135 on page 3-371 of TLMP SDEIS. Table 3-135, in particular, shows the Long-Term and Short-Term Sales program volumes for the decade.

TLMP SDEIS also presents a discussion of timber supply within the long-term contract sale area. As of October 1990 (the date of the TLMP SDEIS analysis), the remaining APC Long-term Timber Sale Contract volume requirement was 2,458 MMBF, including utility, and 1,942 MMBF expressed in net sawlog measure (TLMP SDEIS, table 3-116, page 3-329, table 3-133, page 3-366). TLMP SDEIS alternatives C, D, and P provide, respectively, 2,120 MMBF, 1,920 MMBF, and 1,910 MMBF, net sawlog, from the APC designated sale area (allotments B, H, A-1, and C-Contingency (TLMP SDEIS, table 3-133, page 3-366). So the "current direction" alternative C in the TLMP SDEIS indicates more than sufficient timber remaining available in the designated APC sale area to meet remaining contract volume requirements, consistent with resource protection requirements and other constraints projected in the document. Two other alternatives, including the current preferred alternative, indicate that most of the remaining contractual obligation would be available within the sale area, consistent with the constraints for those alternatives.

Further analysis in TLMP SDEIS is related to suitable-available acres. These are acres of forest that are identified as suitable for timber harvest and which are assigned management prescriptions within the TLMP SDEIS that allow consideration of timber harvest. For each alternative, TLMP SDEIS analysis confirms that the identified suitable-available acres contain more than enough potentially available timber within the sale area to meet the remaining volume commitment. These figures appear in table 3-134, pages 3-368 and 3-369, TLMP SDEIS and are summarized in the following table.

Table 3
Timber Volume Available Within The Contract Area

Alt.	Allotment Area	Suitable-Available (Acres)	Old Growth Standing Vol (MMBF)
A	B	64,052	1,234
	H	30,724	531
	C-Contingency	92,291	1,995
	A-1	72,935	1,124
		-----	-----
		260,002	4,884
B	B	69,963	1,373
	H	30,843	532
	C-Contingency	107,364	2,349
	A-1	107,597	1,766
		-----	-----
		315,767	6,020
C	B	80,897	1,607
	H	71,675	1,470
	C-Contingency	124,020	2,772
	A-1	134,266	2,270
		-----	-----
		410,858	8,119
D	B	93,178	1,837
	H	59,476	1,224
	C-Contingency	132,766	2,963
	A-1	150,007	2,517
		-----	-----
		435,427	8,541
P	B	76,871	1,516
	H	50,581	1,016
	C-Contingency	91,047	1,981
	A-1	154,647	2,588
		-----	-----
		373,146	7,101

Furthermore, TLMP SDEIS displays the number of acres of tentatively suitable lands that are scheduled to be harvested over the planning horizon for each Management Area (TLMP SDEIS, table 3-138, page 3-378). This table indicates that the scheduling of the Southeast Chichagof Project Area and other project areas within the APC sale area to meet contract volume requirements over the next several years is anticipated. In addition, this table shows that there are adequate suitable acres in these Management Areas, scheduled to be harvested, to provide that volume. A portion of table 3-138 is displayed below in table 4. It displays, for Alternative P, the scheduled suitable acres by Management

Area. Table 4 is similar to table 2 which showed the Management Areas scheduled for timber sale preparation during 1991-95. A comparison of these two tables indicates that the Management Areas identified as appropriate for timber harvest activities in the existing TLMP (as amended winter 1985-86) are also identified as appropriate in alternative P of TLMP SDEIS.

Table 4
TLMP SDEIS Alternative P Scheduled Acres (selected Management Areas)

Mgmt. Area	Name	Acres Sched- uled	Percent Of MA	Total MA Acres
C27	Mud Bay	1,660	7.9	21,008
C28	Neka	13,155	16.2	81,130
C30	Freshwater	23,958	21.2	112,824
C31	Whitestone	21,354	28.9	73,882
C32	Tenakee	5,878	23.6	24,918
C34	Crab Bay	6,051	8.3	72,571
C37	Corner Bay	36,265	27.9	129,847
C39	Ushk Bay	3,131	8.2	38,008
C40	Neva-Olga St.	5,671	3.1	180,489
C41	Rodman Bay	12,628	17.0	74,143
C43	Kelp Bay	8,099	7.8	104,011
C44	Upper Kruzof	6,721	10.5	64,189
C45	Mt. Edgecumbe	80	0.2	53,198
C48	Silver Bay	2,028	2.5	81,649

2. Cumulative Effects

The TLMP SDEIS considers the cumulative effects for forest-wide acres managed for timber production for both the long-term and short-term timber sale programs. These effects are discussed on pages 3-371 through 3-381. Cumulative effects for other resources are discussed at the end of their respective sections.

Analysis points to the need to schedule harvest in VCUs assigned management prescriptions which permit consideration of timber harvest, including the VCUs within the Southeast Chichagof Project Area. These VCUs in the current Forest plan, and in the draft revised Forest Plan would be needed to help meet the Tongass National Forest Allowable Sale Quantity, and also the contractual timber volume needs for the APC Long-term Timber Sale. The forest-wide cumulative effects analysis in the TLMP SDEIS supports the conclusion that this harvest can be accomplished within existing and proposed revised TLMP standards and guidelines and other requirements for resource protection.

3. Subsistence

With the passage of the ANILCA, Congress recognized the importance of subsistence resources to rural residents of Alaska. In particular, prior to any disposition of public lands,

an agency must first complete a subsistence effects evaluation, including consideration of the availability of other lands (ANILCA 810 (a)).

Based on a review of available harvest volumes for each VCU in the APC contract area, it appeared that in order to meet contract volume commitments, most of the LUD III and IV VCUs would need some level of harvest prior to the end of the APC contract in 2011. A tentative offering schedule was developed and approved for implementation based on this analysis. In short, all LUD III and IV VCUs adjacent to Chatham Strait, Peril Strait, Sitka Sound, and Tenakee Inlet would be scheduled for harvest within the next 5 to 10 years, indicating a level of impact to all subsistence use areas. However, the most significant impacts on the subsistence resource habitat would not occur until 20 to 30 years after the timber harvest when the second growth canopy closes. When those impacts to subsistence resources are viewed from a reference point 20 years in the future, the particular importance of which areas are scheduled first during a 5-year period appears to be minor.

In considering communities that may be most affected by any proposed timber harvest in the Southeast Chichagof Project Area, Tenakee Springs, Angoon, Sitka, Haines, and Skagway appear to have the strongest cultural and subsistence ties to the area. Each community has its own level of reliance on subsistence as well as its own level of reliance on the Southeast Chichagof Project Area for supplying subsistence resources. The following information about each communities subsistence use is a summary of more detailed information provided in chapters 3 and 4 of the Southeast Chichagof Project EIS.

Tenakee Springs is the closest community to the Project Area and is located approximately 4 miles north of the edge of the Project Area across Tenakee Inlet. The community's proximity to the Project Area increases the importance of the Project Area for subsistence. An indication of this importance is the fact that Tenakee Springs derives approximately one third of its total deer harvest from the Southeast Chichagof Project Area.

In pursuing traditional subsistence resources, Tenakee Springs had an annual harvest of subsistence resources of 342 pounds per capita in 1987. This amounted to 135 lbs. of deer; 8 lbs. of other mammals; 49 lbs. of salmon; 140 lbs. of finfish and shellfish; and 11 lbs. of other resources. Subsistence resource gathering was reported to comprise 42 percent of the household food supply.

Tenakee Springs residents have identified the beach fringe and inland areas from Long Bay in Tenakee Inlet on down to Sitkoh Bay as deer use areas. These use patterns of Tenakee Springs, and those of other communities, can be taken into account in the design and location of harvest units for the Southeast Chichagof Project Area or other project areas. The beach fringe, estuaries, and other areas of critical habitat are generally avoided for both timber harvest and road construction in all project area planning. In addition, it is feasible to design alternatives that stay out of VCUs with high subsistence use. Furthermore, some VCUs may be avoided in all alternatives because of LUD II designation or other factors that might eliminate a VCU from consideration at this time. For example, within the Southeast Chichagof Project Area, VCUS 227-229, 235, and 237 would be avoided in all action alternatives.

Another factor that may be taken into account in the scheduling of project areas is availability of subsistence resources in excess of projected demand. For example, the Kadashan River drainage (VCU 235) has an estimated deer population large enough to sustain harvest far in excess of current harvest demand. In addition, the population is estimated to remain large enough to sustain harvest, in excess of projected harvest demand, at least through the year 2040.

Angoon is the second closest community to the Project Area. However, George and Kookesh (1983) in *Angoon Deer Hunting, 1982* state that "Nearly all hunters surveyed preferred to hunt on Admiralty Island. . ." George and Bosworth (1988) in *Use of Fish and Wildlife by Residents of Angoon, Admiralty Island* indicate that Angoon Tlingits' obtain between 50 and 75 percent of the customary and traditional resources from favored areas along the west coast of Admiralty Island. Deer habitat capability models and ADF&G hunter survey data indicate that the area along the west coast of Admiralty Island adjacent to Angoon is capable of providing much higher levels of deer harvest than the current total deer harvest. Currently, total subsistence deer harvest on the whole of Admiralty Island is only 3 percent of the deer habitat capability. Deer populations can sustain harvest at 10 percent of habitat capability (Flynn and Suring 1989).

The residents of Angoon had an annual harvest of subsistence resources of approximately 242 lbs. per capita in 1987. This amounted to 108 lbs. of deer and other mammals; 70 lbs. of salmon; 57 lbs. of finfish and shellfish; and 7 lbs. of other resources. Subsistence provided 46 percent of the household food supply that year.

Specific areas of importance for subsistence gathering within the Project Area include Sitkoh, Basket and Florence Bays, Lindenberg, and White Rock. Sitkoh Bay is used to harvest deer, salmon, and invertebrates. Lindenberg and Florence Bay are used for harvesting invertebrates and deer hunting. White Rock is used to harvest marine mammals, invertebrates, salmon, and deer (George and Bosworth 1988). The near-shore area from False Island in Peril Strait to Kadashan Bay in Tenakee Inlet is also used for deer hunting by Angoon residents.

Alaska Department of Fish & Game (ADF&G) hunter survey data indicates that Angoon residents harvested 8 percent of their total deer harvest from the Project Area in 1987; 7 percent in 1988; and 20 percent in 1989. No deer were reported harvested from the Project Area in 1990.

Sitka residents harvest a wide variety of resources including deer, bear, seal, waterfowl, furbearers, salmon, shellfish, and marine fish, among others. In 1987, the annual harvest of subsistence resources was 139 lbs. per capita. Subsistence provided 24 percent of its meat and fish that year.

Sitka residents identify beach fringe and inland from Long Bay on down to Trap Bay in Tenakee Inlet as deer use areas. The beach fringe and inland from Little Basket Bay in Chatham Strait over to Broad Finger Creek in Peril Strait are also identified as deer use areas. On the average Project Area WAAs supply 7 percent of Sitka's deer. This accounts for 35 percent of the harvest from Project Area WAAs.

Haines is located on the north end of Lynn Canal on the Chilkat Peninsula and is approximately 100 miles from the Project Area. The area from Long Bay on down to Trap Bay in Tenakee Inlet was identified by Haines residents as important deer use areas. The beach fringe from Basket Bay in Chatham Strait over to Finger Creek in Peril Strait was also identified as important deer use areas. On the average, Project Area WAAs supply 18 percent of Haines' deer. This accounts for 8 percent of the harvest from Project Area WAAs.

Skagway is located at the extreme northern end of Lynn Canal in northern Southeast Alaska approximately 100 miles from the Project Area. Skagway residents identify the beach fringe and estuaries in Seal, Crab, and Trap Bays for deer hunting use. On the average, Project Area WAAs supply 15 percent of Skagway's deer. This accounts for less than 1 percent of the harvest from Project Area WAAs.

As a result of several considerations, including the availability of subsistence resources on Admiralty Island and in undisturbed areas of Chichagof Island, including LUD II areas within or adjacent to the Project Area (such as the Kadashan drainage), the relative independence of most communities from subsistence resources in the Project Area, as well as analysis contained in the Tongass Land Management Plan SDEIS, the Forest Service determined to schedule an environmental analysis of the Southeast Chichagof Project Area ahead of other Project Area analyses. Subsequent Projects including North and East Kuiu Island, Ushk Bay, Eight Fathom, and Northwest Baranof Island will undergo environmental analysis within the next 3 to 5 years.

Extensive forestwide cumulative effect analysis has been included in the TLMP SDEIS (TLMP SDEIS pages 3-628 through 3-765). That analysis, and the tables of data shown in appendix K of TLMP SDEIS are incorporated by reference into this document. The data in appendix K and L indicates subsistence hunting of deer and other uses in virtually every area of the Tongass with substantial quantities of harvestable timber. The following information is extracted directly out of the Tongass Land Management Plan Revision, Supplement to the Draft Environmental Impact Statement, pages 3-762 and 3-763:

In conducting the subsistence evaluation it is determined that, in combination with other past present and reasonably foreseeable future actions, none of the alternatives would pose a significant possibility of significant restriction for salmon, other finfish, marine mammals, invertebrates, plants, mountain goat, moose, waterfowl, sea birds, or other small game. Together these resources account for an average of 79 percent of the total harvest of subsistence resources (Kruse and Muth, 1990).

In considering the impacts of future actions that may take place under the proposed alternatives on deer, two types of analysis was conducted. Potential effects were first determined for those WAAs where residents have successfully harvested deer, then for those WAAs where residents have ever gone to harvest deer. Both 10 percent and 20 percent harvest levels of the deer population were used.

Considering only those WAAs where residents successfully harvested deer and assuming a harvest level of 10 percent of the population, there would be sufficient deer in all alternatives for the next 50 years to meet all subsistence needs for all communities except Gustavus, Hoonah, Kake, Pelican, Sitka, and Yakutat (appendix K). For these communities, there would be insufficient habitat capability to support harvest by all subsistence users (regardless of the community of origin). However, at 20 percent of the population, all subsistence needs for these communities would be met by all alternatives for the next 50 years (appendix K).

If instead of considering only those WAAs in which hunters were successful, we consider all WAAs ever hunted by community residents, then there would be sufficient deer habitat capability to support all subsistence hunters in the WAAs used for hunting by all subsistence communities except for Pelican and Gustavus. If instead of assuming a 10 percent harvest level, a 20 percent harvest level is used, there would be sufficient habitat capability to support all subsistence harvest in all WAAs used for hunting by all subsistence communities.

As a result of the analysis of the impacts of projects that would be permissible under each of the alternatives considered for adoption in the Forest Plan, it has been determined that all of the alternatives, if all permissible projects were fully implemented, have the potential to impact subsistence uses of deer, brown bear, and furbearers (specifically martens) due to potential effects of projects on abundance/distribution, and competition.

The analysis shown in chapter 4 of this Project EIS is supported by the analysis shown above in the TLMP SDEIS. The conclusion stated above, "it has been determined that all of the alternatives, if all of the permissible projects were fully implemented, have the potential to impact subsistence uses of deer. . .", supports the conclusion that any environmental analysis area within the Tongass would have a similar chance of having a significant possibility of a significant restriction on subsistence resources for Sitka Black-tailed deer, and other mammals.

The analysis for ANILCA section 810 are shown in the Subsistence section of chapter 4, in this EIS. The determinations made from the ANILCA section 810 analysis and findings are a part of the Record of Decision for this project and were developed in conjunction with the Final EIS.

Forest Plan Implementation

Review of Available Volume

In July 1990, a working group conducted a review of each VCU within the designated sale area for available volume. This analysis was based on computer inventories and Allowable Sale Quantity (ASQ) calculations from TLMP. Worksheets supporting the analysis and conclusions are included in the planning record.

The working group used the following guidelines to identify likely areas to schedule for environmental analysis in the near future:

- (1) Evaluate by VCU the total available volume within the designated sale area. Between 1991 and 1996, there is a need to identify a potential harvest of 600 MMBF.
- (2) Identify a tentative operating schedule which addresses volume to be offered from both Stikine and Chatham Areas.
- (3) Prepare a schedule of environmental analysis areas which shows how the Chatham and Stikine Areas will meet the tentative operating schedule from 1991 through 1996. This schedule must provide a minimum of 240 MMBF 'current timber supply' from January 1, 1991 through December 31, 1995. After that date the schedule must show at least 360 MMBF.

The results of the first step by the working group analysis are presented in table 5. This analysis took into account areas included in the current (at that time) House of Representatives bill HR 987. The results of this volume review, further supported by TLMP revision information, provided the basis for scheduling the next series of environmental analyses.

Table 5
Available Volume By VCU In The APC Contract Boundary (9/89).

Analysis Area	VCUs in Analysis Area	1991-1996 (MMBF)
Areas Free From Legislative Consideration		
AA 1 Lisianski Lisianski	188, 250, 252, 253, 256-258, 260	25.8
AA 2 - Mud Bay-Neka Saltwater	222	12.0
AA 3 - Freshwater Freshwater	Scattered 211, 216, 219	30.2
AA 4 - Upper Tenakee Inlet Crab Bay	230, 231, 232, 233, 234	86.7
AA 5 - Hoonah Sound AA 6 - Lower Tenakee Inlet-Sitkoh Bay Sitkoh	(Proposed Wilderness see below)	
AA 7 - Rodman Bay Saook Bay, Appleton	240, 241, 242, 243, 244, 245	61.5
Rodman-Duffield	293, 294	71.7
AA 8 - Sitka Sergius-Fish	291, 292, 293	42.9
Kruzof	287, 288, 289, 290	97.4
Nakwasina	303, 306, 308, 309	44.1
Kalinin	300	37.7
Neva	304, 305	7.7
AA 9 - East Baranof Catherine Island	302	28.4
Kelp Bay	296, 297	54.8
AA 10 - Silver Bay Silver Bay	298, 314, 315	56.9
	319, 320, 321, 322, 323, 324	46.9
	Total Available Excluding HR 987 Areas	704.7
Proposed Wilderness Areas		
AA 1 - Lisianski	189	9.3
AA 2 - Mud Bay - Neka	191-197	141.7
AA 4 - Tenakee Inlet	224-227	64.5
AA 5 - West Hoonah Sound	279-283, 285, 286	115.7
AA 1/4 - North Arm/Hoonah Sound	248, 249, 262, 246, 247	59.7
AA 6 - Kadashan	235, 237	51.8
	Total Inside Wilderness Proposal	410.1

Analysis Area Reviews

For each area identified as having sufficient volume available to consider for further environmental analysis at this time, a review was conducted to decide which areas to schedule first, considering the current TLMP and proposed revised TLMP schedule, and other factors described below. The results of this review and supporting reasons for each area appear below:

Analysis Area 1: This area includes the Lisianski River and those VCUs located in close proximity to the community of Pelican. Several of these VCUs were included in legislation and proposed as a wilderness addition or as a roadless area adjoining the West Chichagof - Yakobi wilderness area. The remaining VCUs have low volume potential with high costs due to needing multiple log transfer facilities, high cost of initial construction and water transportation. This area was negotiated out of 1981-86 and 1986-90 FSEIS due to high public concern. With enactment of TTRA, Area 1 has since been legislated as a LUD II area. This area is no longer eligible for timber sale planning analysis.

Analysis Area 2: This area is composed of one VCU, VCU 222, with transportation access to the Salt Lake Log Transfer Facilities. There is low volume available because this VCU has been harvested in the 1981-86 and 1986-90 operating periods with approximately 20 percent of the CFL removed. Due to concern for harvest adjacency in planning future harvest, this area is ranked low for scheduling environmental analysis.

Analysis Area 3: Included in this area are three VCUs which were not scheduled for harvest in SEIS. VCU 211 was deferred from harvest in the 1986-90 plan. VCUs 216 & 219 had roads and timber harvest planned in 1976-81, 1981-86 and 1986-90 operating periods. Much of this has yet to be implemented due to ongoing litigation. This analysis area has a low priority for scheduling environmental analysis, pending outcome of ongoing litigation.

Analysis Area 4: The Upper Tenakee Inlet-Crab Bay Analysis Area had limited harvest activity in the past, with removal of between 11 and 22 percent of the CFL. Sufficient volume remains to warrant further EIS analysis. This area is considered to have moderate resource use conflicts, somewhat lower than other areas considered. Due to risk assessment for perceived resource use conflicts, this area has a moderate scheduling priority.

Analysis Area 5: Hoonah Sound - This area was included in legislation proposals before the Congress, and was rated low priority for scheduling until the enactment of TTRA determined the upper portion (VCUs 282, 283, 285, and 286) would be legislated LUD II areas, and the remaining VCUs (279, 280 and 281) would remain available for timber harvest. After enactment of the TTRA, the VCUs available for timber harvest are considered to have a high priority for scheduling further environmental analysis of timber harvest, to utilize environmental analysis done in this area during the 1986-90 Five year operating plan EIS for APC.

Analysis Area 6: Lower Tenakee Inlet and Sitkoh Bay appears to have sufficient volume to justify consideration as a potential high priority area with a low perceived risk for resource use conflicts. This area was cut in the late 1960s and early 1970s with total harvest approaching 35 percent. Due to the duration since past harvest it is ready for a 2nd entry harvest. This makes it a high priority for scheduling environmental analysis of timber harvest.

Analysis Area 7: This area needs to be broken into two considerations. VCUs 291, and 292 were heavily entered in the 1960s with a total harvest ranging from 40 to 55 percent of the total CFL and needs more time to recover. These VCUs have a low priority for scheduling. VCUs around Saook Bay and Appleton Cove were partially entered with timber removal ranging from 10 percent in Saook Bay up to 30 percent in Appleton Cove. These two VCUs are ready for another harvest. They are far enough away from Sitka and other population centers so perceived resource use conflicts would be lower than those areas closer to Angoon or Sitka. This area has a high priority for scheduling timber sale environmental analysis.

Analysis Area 8: Kruzoff Island, Nakwasina Sound, Katlian Bay were logged in the early to mid 1960s. Past harvest ranged from 45 percent up to 75 percent of the CFL, recovery rates are incomplete indicating a need to delay a second entry. For these reasons VCUs 300, 301, 303, 303, 304, 305, 306, 309, and 313 are of low priority for inclusion in any environmental analysis. The remaining VCUs 287, 288, 289, and 290 would be of medium to high priority for timber sale environmental analysis, as these areas had a lighter harvest approximately 15 percent of the CFL and are ready for a second harvest. Areas north of Sitka, and the adjoining VCUs and islands, are thought to have high public interest and high potential for resource use conflicts.

Analysis Area 9: East Baranof and Kelp Bay Area - Harvest first occurred in the early 1970s with removal of approximately 6-10% of the CFL. Area was deferred per January 4, 1985 agreement between FS and APC in preparing the 1986-90 FEIS due to low timber market values for the harvest units as designed at that time. With higher timber markets and/or modified design it would be appropriate to schedule this area for additional harvest. There is sufficient volume to justify a high priority for timber sale environmental analysis. This area is considered to be of low to moderate public interest to the community of Sitka, and is considered to be of high public interest to the community of Angoon.

Analysis Area 10: Silver Bay - Low amounts of volume available and potential perceived dangers to wildlife. Past harvest in the early to mid 1970s ranged from 24 percent up to 37 percent. Much of this area was not scheduled by TLMP (as amended) for timber harvest. This area has a low priority for scheduling environmental analysis. Being at the "Back door to Sitka" this area is considered to have a high perceived risk for resource use conflicts.

Results of Analysis

Upon completion of the above analysis, two Project Areas were identified and scheduled for environmental analysis. These two areas were Kelp Bay and Southeast Chichagof. Following enactment of TTRA, a schedule of additional project level environmental analysis was identified for fiscal years 1993 through 1996. This schedule has been reviewed and reaffirmed and is represented in table 1 at the beginning of this appendix. The following section presents the rationale for the first four Projects.

- a) The East Baranof (AA9) and Saook and Appleton Cove from Rodman Bay (AA7) project area is top priority for analysis of approximately 100 MMBF. It is noted this is an estimated volume, and not a "target". The East Baranof/Rodman Bay area was identified in the 1985-86 Amendment to TLMP as scheduled for harvest in the 1990-1995 period. Historically, the Kelp Bay, and Catherine Island area was scheduled for harvest in 1981-86 EIS. Due to low volumes per acre and poor market conditions this area was not harvested,

and was negotiated out of the 1986-90 EIS. With currently higher markets, it is thought this area, if combined with other adjacent areas, might meet the mid market assessment. It was also felt the Kelp Bay/Rodman Bay area has had limited previous entries, making them partially roaded and developed. In terms of political controversy it makes sense to schedule harvest there, rather than attempting to schedule harvest into an area which has not had previous development. This conclusion is consistent with public comments received on the FSEIS 1981-90.

- b) Crab Bay, Corner Bay, and False Island transportation systems are to comprise a single project area to analyze harvest of approximately 100 MMBF. This is a combination of Upper Tenakee Inlet (AA4) and Lower Tenakee Inlet-Sitkoh Bay (AA6). Again this is an estimate volume and not a mandated "target".
- c) West Hoonah Sound is scheduled for Fiscal Year 1993. Enactment of TTRA did not change the Land Use Designation for VCUs 279, 280 and 281, making it available to be scheduled as a NEPA project area. This area is next in priority due to the opportunity to efficiently use work done for a previous EIS prepared for the 1986-1990 five-year operating plan.
- d) The Mud Bay-Neka (AA2) was the next logical area to schedule for 1994. Similar to West Hoonah Sound, this area was under consideration by Tongass Legislation. Enactment of TTRA did not change the LUDs for VCUs 193, 196-198, 200-202, 222 and 223, making it available to be scheduled for environmental analysis. This area is next in priority to permit the Forest Service to efficiently use work previously completed. The Chicken Creek Logging feasibility study was completed in 1986, making this area a higher priority than other areas where analysis has not been started.

Appendix B

Summary of Public Involvement

APPENDIX B PUBLIC INVOLVEMENT

Date	Activities
May 2, 1990	Notice of Intent, Federal Register
May 11, 1990	Mailed Scoping Document to 420 individuals, organizations, and State and Federal agencies
September 1990	Mailed 425 copies of the Southeast Chichagof News bulletin to individuals, organizations, corporations, and State and Federal agencies
March/April 1991	Interdisciplinary meeting with ADF&G to develop unit pool
June 16, 1991	Meeting in Angoon with the Alaska Native Brotherhood and City Council
July 15, 1991	Meeting with Tenakee Springs City Council
August 5/6, 1991	Meeting in Project Area with Alaska Department of Natural Resources
October 1, 1991	Meeting with Southeast Native Subsistence Commission (SENSC)
October 19, 1991	Meeting with SENSC
November 22, 1991	Meeting with SENSC and ADF&G
December 16, 1991	Meeting with SENSC and ADF&G in Juneau
March 5, 1992	Sitka ADF&G Advisory Board—Presentation of project and alternatives
March 11, 1992	Sitka ADF&G Advisory Board—Review of alternatives proposed in Draft EIS
March 25, 1992	Review of Draft EIS Alternative Maps in Angoon in conjunction with Kadashan study
March 26, 1992	Review of Draft EIS Alternative Maps in Tenakee Springs in conjunction with Kadashan study
June 11, 1992	Meeting with Sitka Fish and Game Advisory Board
June 12, 1992	Meeting with SENSC
June 15, 1992	Meeting with Sitka Tribe of Alaska (Gus Adams and staff)
June 15, 1992	Open House in Sitka, 3 to 6 p.m. Sitka Subsistence Hearing, 7 to 9 p.m.
June 16, 1992	Open House in Haines, 3 to 6 p.m. Haines Subsistence Hearing, 7 to 9 p.m.

June 17, 1992	Open House in Skagway, 3 to 6 p.m. Skagway Subsistence Hearing, 7 to 9 p.m.
June 18, 1992	Open House in Tenakee Springs, 3 to 6 p.m. Tenakee Springs Subsistence Hearing, 7 to 9 p.m.
June 19, 1992	Open House in Angoon, 3 to 6 p.m. Angoon Subsistence Hearing, 7 to 9 p.m.
June 23, 1992*	Open House in Tenakee Springs, 3 to 6 p.m. Tenakee Springs Subsistence Hearing, 7 to 9 p.m.
June 24, 1992*	Open House in Angoon, 3 to 6 p.m. Angoon Subsistence Hearing, 7 to 9 p.m.
July 17, 1992	Meeting in Juneau with Bob Willard, President of SENSC
July 22, 1992	Meeting in Sitka with Mark Jacobs, IRA
July 24, 1992	Meeting in Juneau with Bob Willard, President of SENSC
July 30, 1992	Meeting in Sitka with Gus Adams of Sitka Tribe of Alaska (STA)

* These additional subsistence hearings were held to accommodate those people unable to attend the earlier hearings because of conflicts with a special troll fishery opening.

Southeast Chichagof Draft EIS Video

A ten-minute video was produced which discusses the alternatives and solicits public comments on the Southeast Chichagof Draft EIS. The availability of the video was publicized through public service announcements that appeared in the Sitka Sentinel and on KTNL/SNB, KCAW, KIFW, and the Cooke Cablevision news crawl. It was aired in its entirety on KTNL TV on May 18, 1992 at 5:50 p.m.; on May 30, 1992 at 5:30 p.m.; and on June 12, 1992 at 5:50 p.m. Individual copies of the video were distributed to the following:

Forest Service, Chatham Area, Southeast Chichagof Interdisciplinary Team
Doug Stockdale, Public Affairs Officer, Forest Service, Chatham Area
Planning Record for Southeast Chichagof EIS
Hoonah Ranger District, Forest Service
Juneau Ranger District and Admiralty National Monument, Forest Service
Sitka Ranger District, Forest Service
Michael Condon, Stikine Area, Tongass National Forest
Gary Lehnhausen, Chugach National Forest
Jimmy Waters, Forest Service, R-10, Regional Office
Kettleson Memorial Library, Sitka, AK
Alaska Pulp Corporation
Sitka News Bureau, KTNL

The Southeast Chichagof Project video was also made available to the public for home viewing through both the Forest Service and the Kettleson Memorial Library. The video was borrowed from the library eight times between May 21 and July 17, 1992, and was loaned by the Forest Service, Southeast Chichagof Interdisciplinary Team to the following individuals and organizations:

Ken Hammons, Alaska Pulp Corporation (APC)
Jim Wilson, Forest Service employee
Sitka Conservation Society
Alaska Forest Association
Jim Digennaro, Assistant Professor, Sheldon Jackson College
Marlene Campbell, City of Sitka, Planning Department
Diane Zeil, Tenakee Springs resident
Mike Weber, Forest Service employee
Cindy Hartmann, Forest Service employee

The video was shown at the following public meetings:

Forest Service Chatham Area Family Meeting, May 26, 1992
Sitka Fish and Game Advisory Board Meeting, June 11, 1992
Subsistence Hearing Open House in Sitka, Haines, Skagway, Tenakee Springs, and Angoon, June 15 through June 19 and June 23 through June 24, 1992

Six videos were made for APC at the request of Rollo Pool, Manager of Public Relations for APC. Mr. Pool kept one copy of the video in his Sitka APC office and showed it to approximately six people. He sent one video each to five logging camps:

Homeshore
Corner Bay

Freshwater Bay
Whitestone Logging in Hoonah

Rowan Bay

Appendix C

Response to Public Comments

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Response to Public Comments

Appendix C

The Forest Service (FS) received a total of 28 written comments on the Alaska Pulp Corporation Long-term Timber Sale Contract Southeast Chichagof Draft Environmental Impact Statement (EIS). All comments have been read and classified by category and subcategory. The broadest categories are identified by Roman numeral designation I, II, III, etc. These broad categories are then divided into more specific subcategories and identified by alphabetical designations A, B, C, etc. The specific concerns, suggestions, and/or questions are placed under the proper subcategory and identified by numbers 1, 2, 3, etc. At this last level, the respondent is identified by an assigned abbreviation. Abbreviations for each are listed below.

The response letters have been copied and annotated to indicate where the topic is discussed in the FS response. For example, an annotation of VI.A.1 on the HMD letter indicates that the FS response can be found following the categories as noted below:

VI. FISH AND WILDLIFE

A. General

1. HMD: Impacts on birds and other wildlife are only superficially addressed.

FS RESPONSE: [Here, the Forest Service will respond to the above comment.]

The annotated letters are located directly after these responses. The table of contents for these letters is located on page 27.

AH	Audrey Hitch
AMG	Avrum M. Gross
ANGN	City of Angoon
APC	Alaska Pulp Corporation
BW	Bill Whitman
DMZ	Diane M. Ziel
DOI	Department of the Interior
DS	Doug Sanvik
EPA	Environmental Protection Agency
FIKLC	False Island Kook Lake Council
FS	Forest Service
HMD	Helen M. Drury
HT	Helen Trotter
JMM	Joan M. McBeen
KML	Khoi M. Le
KP	Kate Palmer
LCC	Lynn Canal Conservation, Inc.
LMS	Lee M. Schmidt
NMFS	National Marine Fisheries Service
PH	Paul Hamby
RAP	Robert A. Pegues
RB	Russell Brown
RH	Russell Heath
SCS	Sitka Conservation Society
SEACC	Southeast Alaska Conservation Council
SHS	Steward H. Stephens
SITKA	City and Borough of Sitka
TENSP	City of Tenakee Springs

I. ALTERNATIVES

A. General

RAP, SEACC, SCS, ANGN, FIKLC, TENSP: The Draft EIS presents an inadequate range of alternatives. It seems to point to a predetermined decision to log around 100 MMBF. It fails to show that timber is not available elsewhere outside the Project Area. It should also consider alternatives which reduce the timber provided under the APC Long-term Timber Sale Contract, consider canceling the contract, or consider excluding the Project Area from the contract area.

FS RESPONSE: Council on Environmental Quality (CEQ) regulations governing the implementation of the National Environmental Policy Act (NEPA) require that the alternatives, including the proposed action, respond to the underlying purpose and need for the project (40 CFR 1502.13). In the Notice of Intent (NOI), the Forest Service has identified the purpose and need for the proposed action and announced plans to prepare an EIS. This is published in the Federal Register. The purpose and need for the Southeast Chichagof Project is to make approximately 100 million board feet (MMBF) of timber volume available in compliance with the Alaska Pulp Corporation Long-term Timber Sale Contract.

CEQ regulations state that alternatives shall encompass those to be considered by the ultimate agency decisionmaker [40 CFR 1502.2(e)], and respond to the underlying purpose and need for the project (40 CFR 1502.13). The goal of 100 MMBF of net sawtimber equates to a total harvest of approximately 121 MMBF of sawtimber and utility volume. The action alternatives presented in the EIS range from 108 MMBF to 137 MMBF net sawlog plus utility. This range is 89 percent to 113 percent of the stated goal of 121 MMBF of total harvest. More importantly, these alternatives represent reasonable courses of action that define the issues and provide a clear basis for choice among options while accomplishing the stated purpose and need.

As stated at the beginning of Chapter 2, each alternative responds differently to the issues discussed in Chapter 1. The alternative development process was issue-driven and began with the determination of specific options that could be utilized to resolve each issue. The developed alternatives explore ways to satisfy public concerns and resolve the issues. They respond differently to the issues and provide a range of choices to the decisionmaker and the public.

One specific approach for addressing the identified issues was developing the theme of Alternative F to focus the proposed actions, as much as possible, away from the primary recreation and subsistence use areas around lakes and along salt water. Alternative E focuses the proposed actions away from salmon streams, lakes, salt water, and riparian areas and concentrates activities in higher elevations and upper valleys. This approach reduces the effect of the proposed actions on the water, fisheries, recreation, and subsistence resources in the Project Area. Other alternatives similarly reflect different approaches to addressing the public issues.

Appendix A of the EIS describes the reasons for scheduling the environmental analysis of the Southeast Chichagof Project Area at this time. Appendix A also describes the need for approximately 100 MMBF in one or more offerings to assist in meeting contract requirements. It briefly addresses the reasons why providing less than the contract volume was not considered in detail. This would include the option of cancelling the contract. In addition, reducing the volume provided, cancelling the contract, or withdrawing the Project Area from the contract area does not meet the purpose and need for the Southeast Chichagof Project. Appendix A also includes a discussion of available timber outside the Project Area.

Congressional action in the 1950s resulted in the Alaska Pulp Corporation (APC) contract. One purpose of this action was to “establish a new industrial enterprise which will be an important and significant step in the industrial development of Alaska.” Through this action, Congress decided it was in the public interest to provide community stability and industrial development in Alaska.

The Forest Service has administrative authority to implement the APC contract. It was to this end that the purpose and need was written for the Southeast Chichagof Project Area. Other public interests and concerns are considered in each alternative developed to meet the APC contract requirements. The no-action alternatives are also fully evaluated.

B. HMD, FIKLC: Support No-action.

FS RESPONSE: Comment noted and considered.

C. DS, KP, AH: Support A2.

FS RESPONSE: Comment noted and considered.

D. BW, AH (third choice): Support Alternative C.

FS RESPONSE: Comment noted and considered.

E. RB, AMG, PH, KML, SITKA, SHS, NMFS: Support Alternative E.

FS RESPONSE: Comment noted and considered.

F. LMS: Support Alternative F.

FS RESPONSE: Comment noted and considered.

II. CULTURAL

A. Inventory

SEACC: The Draft EIS is deficient in its failure to inventory and fully describe all eligible and potentially eligible cultural properties. An inventory conducted just prior to logging activities denies public input. None of the units were traversed by an archaeologist to identify historical sites.

FS RESPONSE: Table 3-39 in the EIS lists all known and identified sites within the Project Area. Also included are all known cultural resource surveys that have previously taken place in this Project Area. Surveys are currently being conducted [according to Section 106 of National Historic Preservation Act (NHPA)] within the boundaries of the Project Area. A Research Design was submitted to and approved by the State Historic Preservation Officer (SHPO) which explicitly outlined where surveys are to be conducted in the High Probability Areas. All alternatives are considered in this research design. All harvest units, road corridors, and other areas of activity which fall into the High Probability Zone have been identified and are currently being surveyed. The EIS is not the appropriate place to describe all eligible or potentially eligible sites, since this is sensitive information and protected by the Archaeological Resources Protection Act, 16 U.S.C. Sec. 470hh(a). All sites will be examined and determinations of eligibility and effect will be completed for each site within the Project Area prior to the implementation of any ground-disturbing activities. These determinations will be included with the survey results write-up and will be submitted to SHPO for their review and concurrence this winter.

Concerning the definition of the High Probability Zone, Table 4-83 in the Draft EIS is incomplete; a correction has been made in the Final EIS. The Draft EIS (page 4-110) has three paragraphs defining the High Probability Zone which state that this zone is not strictly limited to 0-100 feet above sea level but, instead, is a dynamic zone, depending on the resources being considered.

With regard to the comments expressed concerning public participation (under NHPA), the public review period for the Draft EIS allows the public an opportunity to comment on the prehistory and history of the area. Table 3-38 (in the Draft EIS) lists the total number of sites identified within the Project Area. The public is welcomed to comment on numbers (represented/misrepresented) and/or provide additional information on any sites within the Project Area. Preferred policy as stated in the Draft EIS (page 4-111) is to protect every site identified within a Project Area from any project impact. To this end, determinations are completed and mitigation plans outlined and accomplished prior to any ground-disturbing activity. "Such measures could include relocating or redesigning some timber management activities to avoid disturbing cultural resources as well as providing protection of sites through the use of barriers and ensuring recovery of scientific data or otherwise documenting sites that cannot be avoided or protected" (Draft EIS, Ch. 4, p. 11). Because of the nature of archaeological sites (especially prehistoric sites), identification and recovery are extremely difficult in the dense vegetation of Southeast Alaska. A monitoring factor is always figured into the research design to identify sites which may be uncovered during logging and associated activity and which were not identified during the cultural resources survey.

Surveys are currently underway for the Southeast Chichagof Project Area. All areas identified in the research design as needing to be surveyed will be completed prior to the end of this field season. Additionally, the survey results are concurrently being written up to expedite the completion of the Determinations of Eligibility and Effect.

Finally, with regard to footnote #4 of SEACC's letter, the Ackerman study (1985), as noted by Moss, was considered during the preparation of this DEIS in that it is referenced in the Research Design which was sent to SHPO for review and concurrence.

III. CUMULATIVE IMPACTS

A. Inadequate Treatment

DOI, RAP, SEACC: The Draft EIS fails to inform the public of the cumulative effects of timber policy on Southeast Chichagof, including the effects of several other projects on Baranof, Kuiu, and Chichagof Islands (i.e. Kelp Bay, Ushk, Kuiu). It does not address long-term impacts from timber harvest outside the Project Area. The analysis is in such finite detail, one cannot assemble the overall impact.

FS RESPONSE: The effects of the proposed actions on individual resources are discussed in Chapter 4 (Environmental Consequences) under each resource heading. The cumulative effects, including the effects of past, present, and future logging are presented at the end of each of the resource sections. The discussion includes cumulative effects of past, present, and future logging within the Project Area as well as consideration of proposed logging in other Project Areas.

In addition, the forestwide effects of logging on the Tongass National Forest were displayed in the Final Environmental Impact Statement for the Tongass Land Management Plan published in March 1979 and in the Supplement to the Draft Environmental Impact Statement for the Tongass Land Management Plan Revision, incorporated by reference in the Draft and Final EIS for Southeast Chichagof. The cumulative effects of the proposed actions are also discussed in Appendix A, Reasons for Scheduling the Environmental Analysis of the Southeast Chichagof Project Area.

The Tongass Land Management Plan (TLMP) is the planning stage where tradeoffs among areas forestwide over the remaining contract term and beyond are analyzed. This would include evaluation of many items such as timing, subsistence, availability of timber, and other considerations. The Southeast Chichagof Project Area was selected after consideration of the current TLMP (published March 1979) and the July 1986 and November 1990 amendments. Although the Plan was originally published 13 years ago, it has been reviewed and amended as recently as 2 years ago.

The TLMP is a permissive plan with four zones or Land Use Designations (LUDs) and allows analysis and scheduling of individual projects based on a zoning concept. There are 15 VCUs within the Southeast Chichagof Project Area in LUD IV; VCU 239 is in LUD III; and 4 VCUs (VCUs 228, 229, 235, and 237) are in LUD II. None of the action alternatives propose activities in the LUD II VCUs. LUDs III and IV permit development for commodity resources. The proposed actions are consistent with the direction in TLMP.

TLMP, as amended, is the current forest plan. National Forest Management Act (NFMA) regulations state that forest plans should be reviewed and revised every 10 to 15 years. The ongoing revision is within the spirit and intent of NEPA, in that revision efforts started in 1987. Until such time as the revision is complete, the current TLMP, as amended, is the governing plan. In addition, the Southeast Chichagof Project Area is subject to and consistent with numerous laws and regulations, including those enacted since March 1979 [such as the Alaska National Interest Lands Conservation Act (ANILCA)].

TLMP is currently under revision, and the public can influence the scheduling of timber sale and other projects for the whole forest. The Draft EIS for TLMP was published June 1990, and a Supplement to the Draft EIS was published in August 1991. The Supplement to the Draft EIS (SDEIS) for the TLMP Revision and the supporting material is incorporated by reference into the Southeast Chichagof EIS. The comprehensive analysis in the SDEIS (including the cumulative effects regarding projected areas of timber harvest) has been fully considered in proposing the Southeast Chichagof Project Area for timber harvest. The public has been encouraged to make its concerns about scheduling projects known to the TLMP Revision planning team. The allocation of timber harvest forestwide, or within the APC contract area, is outside the scope of a project-level EIS such as Southeast Chichagof.

B. Effects

KP: Why is a significant possibility of a significant restriction on subsistence use of deer in the Project Area expected under the no-action alternatives? Is it a result of the cumulative impacts of past timber sales?

FS RESPONSE: A significant possibility of a significant restriction on subsistence use of deer in the Project Area is expected under the no-action alternatives because current deer harvest exceeds estimated deer available for harvest in WAAs 3309 and 3629 (see Figures 4-5 and 4-8 and Table 4-80). In fact, current harvest exceeds the deer habitat capability that existed prior to any timber harvest in these WAAs.

IV. THE DRAFT EIS PREPARATION

A. Timing of the Draft EIS

ANGN, HMD, JMM, SEACC, SCS, TENSP, DMZ, FIKLC: The Draft EIS is released at a time when most interested people cannot study the document and comment because they are out fishing and subsisting.

FS RESPONSE: We agree that the summer months are a busy time in Southeast Alaska. But it is difficult, if not impossible, to find a time convenient for everyone. CEQ regulations and ANILCA Section 810 require that the Forest Service provide adequate notification and hold a hearing in the vicinity of the area involved for persons interested or affected by the proposed action. The Southeast Chichagof Draft EIS and subsistence hearings met or exceeded these standards.

This Draft EIS required a 45-day review period. The draft was available on 1 May 1992, and comments were received until 29 June 1992. This is a total of 59 days in which interested people had time to respond. We also adjusted the subsistence hearings to occur a week after the halibut opening, and we returned to both Angoon and Tenakee Springs to accommodate a special salmon opening which was announced one week prior to scheduled hearings and which was concurrent with those scheduled hearings. Family members,

friends, and neighbors could have provided testimony for those not able to attend the hearings. The option of submitting written testimony provided additional opportunity to comment for those who were not able to testify in person.

B. Interdisciplinary Approach and Field Reconnaissance

HMD, SEACC, SCS: Input by certain disciplines (i.e. soils, hydrology, wildlife, fisheries) was too limited. We question the qualifications and availability of personnel to conduct field reconnaissance. Some entries on unit cards for particular specialties were made by the wrong specialist. Too much field review was done by timber and silviculture specialists, showing bias for timber. A questionable field reconnaissance and ID approach means estimates of impacts on subsistence, fish, and wildlife cannot be substantiated. High or extreme mass-wasting risks noted on unit and road cards are often in units for which there was no field reconnaissance.

FS RESPONSE: The core IDT is comprised of foresters, engineers, data analysts, and fish and wildlife biologists. The extended team has cultural, recreation, and lands specialists; a minerals specialist; a hydrologist; two soil scientists; and another fish biologist.

Intensive IDT meetings were held with all the above specialists to determine the unit boundaries and road locations. In order to schedule the field time needed for the specialists, each one was required to: 1) rate each unit and road boundary according to the amount of risk to their individual resource, and 2) schedule those units and roads, based upon the level of risk. There were few units rated as a high risk. This is a result of prework the IDT initiated in considering all concerns of the specialists and in working to mitigate those concerns before field work was scheduled.

Alaska Department of Fish and Game personnel were invited to the above IDT meeting and were also able to offer their concerns and help set the boundaries of individual units and proposed roads.

There are a total of 170 units displayed as the unit pool in Appendix J, of which 66 were not visited by a soil specialist during the field review. Of the 66 units not visited by a soil specialist, 30 units had high hazard soils. There were no acres of extreme hazard soils located in any of the harvest units. Of the 30 units listed with high hazard soils, only one was not visited in the field by a resource specialist.

Please review the unit and roads cards as presented in the final EIS. Updates have been posted.

C. NEPA Process

HT, SEACC, RAP, SCS, TENSF: The FS decided to harvest at least 108 MMBF of timber before completing the NEPA process. The decision seems to have been made without public input. This is a violation of the NEPA process. The FS fails to show a need for the action as required by NEPA.

FS RESPONSE: Council on Environmental Quality (CEQ) regulations governing the implementation of NEPA require that the alternatives, including the proposed action, respond to the underlying purpose and need for the project (40 CFR 1502.13). In the Notice of Intent (NOI), the Forest Service identified the purpose and need for the proposed action and announced plans to prepare an EIS. This was published in the Federal Register. The purpose and need for the Southeast Chichagof Project is to make approximately 100 MMBF of timber volume available in compliance with the Alaska Pulp Corporation Long-term Timber Sale Contract.

Appendix A of the EIS describes the reasons for scheduling the environmental analysis of the Southeast Chichagof Project Area at this time. (Also see FS RESPONSE I.A and FS RESPONSE XII.A.2.) Also, Appendix A includes a discussion of available timber outside the Project Area.

Congressional action in the 1950s resulted in the Alaska Pulp Corporation (APC) contract. One purpose of this action was to “establish a new industrial enterprise which will be an important and significant step in the industrial development of Alaska.” Through this action, Congress decided it was in the public interest to provide community stability and industrial development in Alaska.

The Forest Service has administrative authority to implement the APC contract. It was to this end that the purpose and need for the Southeast Chichagof Project Area was written. Other public interests and concerns were considered in each alternative developed to meet the APC contract requirements; the no-action alternatives were also fully evaluated.

D. TLMP

TENSP: The Draft EIS was prepared under the old TLMP, but the new TLMP shows some areas in different LUD categories (e.g., Seal Bay and Long Bay) that permit clearcutting. In fact, every watershed in Tenakee Inlet except Kadashan and Trap Bay will be open to clearcutting under the new TLMP. There is, in the Draft EIS, the misimpression that this is not the case.

FS RESPONSE: TLMP, as amended, is the current Forest Plan. National Forest Management Act (NFMA) regulations state that forest plans should be reviewed and revised every 10 to 15 years. The ongoing revision is consistent with the NFMA in that revision efforts started in 1987. Until such time as the revision is complete, the current TLMP, as amended, is the governing plan. This EIS treats Seal Bay, Long Bay, Kadashan, and Trap Bay VCUs as LUD II. There are no activities planned in these VCUs.

E. Supplemental Draft EIS

ANGN, DMZ, FIKLC, SEACC, SCS, TENSP: The inadequacies of the Draft EIS require issuance of a Supplement (e.g. no recognition of impact to Angoon, Tenakee Springs, bad timing of release, poor treatment of subsistence).

FS RESPONSE: We disagree. According to comments received on the Draft EIS from the state of Alaska, this Draft EIS “provides the most complete analysis of subsistence uses and likely impacts to those uses that we have seen in a USFS planning document to date. The DEIS includes more complete subsistence baseline data and advances better analysis of subsistence impacts than has usually been the case with planning documents of this genre.”

A careful review will show that the EIS displays both present and future impacts for ten communities surrounding the Project Area. Both Tenakee Springs and Angoon are included among the ten communities analyzed. See FS response in relation to timing of the DEIS under IV.A.

F. General

SCS: The index is inadequate; it is not broken down enough in some subject areas. The Draft EIS is bulkier than need be; there is too much white space; too many pictures, clip art.

FS RESPONSE: Comment concerning the index has been noted and passed on to our contractor who produces the index. Regarding the format of the EIS, Forest Service guidelines provide direction in this matter. In our efforts to satisfy all parties interested in the material presented in an EIS, we may, indeed, generate a sizeable document. However, it is hoped that breaking the document into three volumes will distribute the material more evenly so that none of the volumes is excessively bulky.

V. ECONOMIC/SOCIAL

A. Commercial Fishing

TENSP, DMZ, FIKLC: The Draft EIS does not adequately treat impacts to commercial fishing of alternatives.

FS RESPONSE: With implementation of the Tongas Timber Reform Act (TTRA) and its mandated stream buffers and following Best Management Practices (BMPs), the anadromous fish resource is not expected to be impacted and, therefore, no impacts to the commercial fisheries are expected.

B. Recreation/Tourism

SEACC, AH, TENSP, DMZ, FIKLC, LCC: The Draft EIS is inadequate in its treatment of impacts on recreation. Actions will generally lower the availability of high quality outdoor recreation opportunities and reduce the economic value of this important sector. The domino effect will have serious cumulative impacts over time. The claim is not supported that outfitters and recreation users have other options to develop opportunities which are not dependent on a natural setting. The recreation/tourism value of Tenakee Springs is not acknowledged.

FS RESPONSE: The *Recreation* section in Chapter 4 of the EIS contains a discussion of the direct and indirect effects of the proposed actions on the recreation resource. Specifically, it displays the estimated effects through changes in acres of each Recreation Opportunity Spectrum (ROS) Class provided in the Project Area and through changes to identified Recreation Places. In addition, there is a discussion of the cumulative effects of the proposed actions combined with potential future actions.

The *Recreation* sections in both Chapters 3 and 4 of the EIS contain a discussion (including a discussion of existing demands and expected trends) of the recreation use in the Southeast Chichagof Project Area. This discussion is based on an analysis done for the Supplement to the Draft Environmental Impact Statement for the Tongass Land Management Plan Revision. One result of that analysis is that an adequate supply of primitive and semiprimitive nonmotorized settings will be available. This analysis also determined that recreational use associated with roaded settings will increase, although not as fast as for other settings.

Tourism and recreation are nonconsumptive uses and depend on the quality of the recreational opportunities and the visual and wildlife resources available. It is expected that some recreational use will be displaced both during and after harvest activities. However Forestwide, existing supplies of recreational opportunities exceed demand (Forest Service 1991b). Therefore, the recreation and tourism industries in Southeast Alaska will not be harmed by the proposed actions in the Southeast Chichagof Project Area.

C. Employment

1. **APC:** The economic analysis is shallow; it should look at the worst-case scenario in terms of jobs. Work disruptions are inevitable if timber harvest is restricted through appeal and litigation. The FS should prepare for this scenario.

FS RESPONSE: The alternatives for the Southeast Chichagof Project considered the full range of impacts to employment and income with the no-action and the action alternatives. It was recognized that the employment and income levels with implementation of the action alternatives would not be available with selection of one of the no-action alternatives. A significant impact would occur to communities whose economic base is dependent on timber harvest and APC processing if sufficient timber were not made available from other sources in a timely manner.

The action alternatives for the Southeast Chichagof Project were designed to provide timber to meet projected mill demand and long-term sale volume requirements, whether or not appeal and litigation restrict timber harvest.

2. **JRS, RW:** Timber harvest means jobs. People need wood products; we need to harvest timber.

FS RESPONSE: The directly- and indirectly-related jobs that are expected to result from the harvest of timber in the Southeast Chichagof Project Area are displayed in the *Economic and Social* section of Chapter 4. Also discussed in this section is the role the Tongass National Forest timber program plays in providing greater economic diversity and stable employment opportunities in Southeast Alaska.

D. Indirect Economic Effects

1. **APC:** It is proper to list the indirect costs of the loss of the timber industry: city budget/payroll costs; lost business sales; lost populations; losses in property values; and, relocation and training.

FS RESPONSE: The IMPLAN model and the Timber Sale Program Information Reporting System (TSPIRS) were used to calculate the indirect impacts related to timber harvest in the Southeast Chichagof Project Area. Estimates of both direct and indirect employment and income are reported by alternative in Chapter 4 of the EIS.

The *Economic and Social* section of Chapter 3 describes the economic base of the communities most likely to be affected by the proposed action. Chapter 4 discusses the direct and indirect consequences of the proposed action on these communities that would result from implementation of the no-action and action alternatives. Also, as discussed in Chapter 4, many factors other than the supply of timber offered from the Southeast Chichagof Project Area influence employment in the timber industry. Actual employment, income, personal and social wellness, quality of life, and community stability will ultimately be determined by the response of the industry to the volume available from Southeast Chichagof and the response of individuals to changes in employment opportunities.

2. **SEACC:** All costs, including the costs to human health and the environment from operating the mills, must be disclosed.

FS RESPONSE: It is not within the scope of the Southeast Chichagof Project analysis to assess the economic or environmental effects of the operation or shutdown of the mills in Sitka or Wrangell. The purpose and need for this project is specifically to make timber available in compliance with the APC Long-term Timber Sale Contract. As it is stated in the description of the project alternatives in Chapter 2 of the Draft and Final EIS, if either of the no-action alternatives were selected, the Forest Service would be required to make timber available from another area to meet contract requirements. Also, since APC could obtain timber volume from other public or private sources to sustain operations, the Sitka and/or Wrangell mills' continued operations are not specifically dependent on the harvest from the Southeast Chichagof Project. The Southeast Chichagof Project evaluates only the availability of timber from this specific Project Area for a specific offering date, 1993.

3. **TENSP:** The socioeconomic impacts displayed do not include local impacts, national impacts, and loss of resources to future socioeconomic needs.

FS RESPONSE: The *Economic and Social* section of Chapter 3 describes the economic base of the communities most likely to be affected by the proposed action. Chapter 4 discusses the direct and indirect consequences of the proposed action on these communities that would result from implementation of the no-action and action alternatives.

Employment and income are two indicators that were used to quantify the effect of the proposed actions as they are related directly and indirectly at the local, State and National levels. The receipts generated,

including revenue to the U.S. Treasury, payments to the State of Alaska, State and local taxes, and dollars brought into the community, all represent an economic benefit of continued timber activity. Also discussed are the possible effects of alteration of the natural conditions and visual resources of the Project Area that may result in displacement of activities dependent on these conditions. The balance necessary to maintain a viable, robust economic and social environment cannot be set at the project level, but is being evaluated at the Forest level with the TLMP Revision. The TLMP Revision documents the assessment of a range of resource allocation alternatives.

E. General

1. **LCC:** The socioeconomic impacts are based on faulty economics, particularly with regard to road building.

FS RESPONSE: We disagree. Forest Service policy dictates the method by which economics are to be accomplished. The displayed economics are in accordance with this regional policy.

2. **FIKLC:** Cancel the 50-year contracts with the mills.

FS RESPONSE: This action is outside the authority of the deciding officer and also outside of the scope of the EIS. See Appendix A, Reasons For Scheduling the Environmental Analysis of the Southeast Chichagof Project Area, for additional discussion.

3. **KP:** Clearcutting is destroying the physical environment and, therefore, the socioeconomic structure of Southeast Alaska communities.

FS RESPONSE: Timber harvest is changing the character of the physical environment within the Southeast Chichagof Project Area. The optimum silvicultural system for application in the hemlock-spruce forests that are characteristic of the Project Area is the even-aged system, clearcutting. Refer to Silvicultural Systems in the *Timber* section of Chapter 4 for a discussion of the selection and effects of harvest methods for this project.

From the standpoint of employment, personal income, population, community services, and community stability, there is substantial benefit from maintaining long-term timber harvest in the Project Area. Many of the residents of Southeast Alaska derive their livelihood from the timber industry or benefit from the economic development it has brought to their communities. Likewise, many residents also participate in a wide variety of activities dependent on the National Forest. As a result, a balance between economic development and an emphasis on noncommodity resources is a desirable objective.

4. **SEACC:** The DEIS also fails to consider the economic benefits of subsistence to the affected communities.

FS RESPONSE: The Southeast Chichagof EIS does not put a dollar value on subsistence resources harvested. However, the EIS does consider the overall importance of subsistence to communities and households and highlights the historic and current subsistence use areas and the per capita harvest of subsistence resources. The per capita income of each community is presented so that a relative economic importance of subsistence can be deduced.

5. **SEACC:** There is no mandate to consider “community stability” in the planning of timber harvest activities. The Forest Service cannot adequately compare the short-term benefits to the timber industry that result from cutting timber in this project to the long-term benefits to recreation, fishing, tourism, and subsistence economies that result from leaving the trees standing.

FS RESPONSE: The Forest Service is required by law (NFMA, RPA, and more specifically, NEPA) to consider economic (and social) as well as environmental effects of National Forest management and specific

project activities. Therefore, it is appropriate to consider the effects of proposed timber harvest on the economic welfare of affected communities.

We agree that it is difficult to assess the economic trade-offs associated with this specific project's proposed harvest and the effects of nonharvest to recreation, fishing, tourism, and subsistence economies. The direct and indirect effects of harvest and nonharvest have been evaluated in terms of timber-related jobs and income. Also, the environmental effects of this project's harvest and nonharvest upon the water and fish, wildlife, subsistence, recreation, and visual quality resources was evaluated. However, the analysis of long-term costs and benefits of management activities to the various economies of Southeast Alaska are better assessed at the Forest planning level and are displayed in the TLMP Revision.

VI. FISH AND WILDLIFE

A. General

HMD: Impacts on birds and other wildlife are only superficially addressed.

FS RESPONSE: A total of 451 species have been evaluated as potential Management Indicator Species (MIS). The Forest Service, in cooperation with the Alaska Department of Fish and Game, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service, identified 13 wildlife MIS for the Tongass National Forest. These include the 10 MIS used for this EIS, plus the black bear, gray wolf, and the mountain goat. Because the black bear, gray wolf and mountain goat do not occur in the Project Area, they were not included in the evaluation. MIS are not chosen on the basis of how common they are; they are selected because they are indicators of habitat condition and well represent the condition of specific habitats over time.

Habitat capability used in the analysis of both Chapters 3 and 4 is not representative of actual populations but does provide a means of comparing the potential effects of proposed actions. We believe the models used to predict habitat capability are valid. Validation monitoring is an ongoing process for the various models used in this DEIS, and changes to the models are incorporated upon analysis of new data by the Tongass Land Management Planning Team and the Alaska Department of Fish and Game.

2. **AVM:** Because of the impact on wildlife, I do not want to see units cut in VCU 242.

FS RESPONSE: There is no additional harvest scheduled in this VCU for this project. There are still units scheduled for harvest in the SEIS Record of Decision remaining unharvested. Unless Alternative A2 is selected in the Record of Decision, these units are still scheduled to be harvested.

3. **SCS:** Comments on Unit Cards regarding wildlife are not backed up with recommendations.

FS RESPONSE: The information placed on the Unit Cards and Road Cards is intended to be used by the presale and layout crews and by the district specialists to lay out the units to meet the intent of the IDT. Individual recommendations for the unit wildlife concerns can be found in the planning record. In all cases, the changes needed to protect or enhance specific wildlife situations have already been considered by the IDT. Any additional changes to road and unit cards should take into consideration another IDT meeting with involved specialists.

4. **KP:** How can the FORPLAN model show that the no-action alternative will cause essentially the same reduction in MIS populations as the action alternatives? Also, it is known that clearcutting causes increased sedimentation and temperature which, in turn, cause loss of fish spawning and rearing habitat. How, then, can the FS claim be substantiated that fish enhancement will create more fish?

FS RESPONSE: The Southeast Chichagof EIS does not use the FORPLAN model to determine specific effects of its alternatives. The SEIS for the '81-'86 and '86-'90 operating periods was used as the source to determine reductions in MIS populations and individual effects of specific actions on fish spawning and rearing habitat for those units in the no action alternatives. A careful review of the data presented in the EIS will show that there are indeed reductions by MIS species for each alternative. These reductions are based on wildlife models run by the Geographic Information System (GIS) on the site-specific information in the data base.

B. Habitat

1. **SEACC:** The Draft EIS does not analyze and identify blocks of old growth and corridors around which alternatives were designed. It does not describe wildlife species to be featured in the retention area, does not break down timber by volume class, and does not describe habitat values to be maintained, etc.

FS RESPONSE: Habitat Conservation Areas identified in the EIS in Figure 4-2 are large blocks of old growth around which the alternatives were designed. The intent of these old-growth acres is to maintain the area in its existing or natural condition for at least the next 10-year period. In addition, the alternative maps depict areas that will be managed to provide old-growth habitat. These are mapped in pink on the alternative maps. Note that these areas mapped in pink will be managed as “no harvest” or managed in other appropriate prescriptions to maintain old-growth habitat conditions during the Southeast Chichagof planning period unless the stated management direction is modified after further NEPA analyses and public disclosure.

There is no specific management planned for wildlife species within these old-growth habitat areas; therefore, no data is presented on animal and plant populations present and habitat values to be maintained.

2. **SCS, LCC, DOI, TENSP:** The Draft EIS does not clearly indicate impacts of alternatives on habitat. The Draft EIS underestimates the effects of timber harvest on fish and wildlife habitat. For example, permanent loss of upland wildlife habitat and adjacent marine habitat values will result from failure to restore or rehabilitate LTFs after completion of timber sale.

FS RESPONSE: The EIS specifies the acres proposed for harvest under each alternative and the acres of roads that will be constructed to access the timber. Changes in habitat are utilized in models to access the resulting changes in habitat capability for 10 wildlife MIS (see Tables 4-57 to 4-77). Changes in habitat as related to wildlife are displayed in Tables 4-54 to 4-56.

Surveys have determined that failure to restore LTFs does not necessarily result in permanent loss of habitat. Log transfer can have a long-term effect on marine organisms where woody debris accumulates. Therefore, care is taken with the selection and design of LTF sites to increase the likelihood of bark dispersal and flushing. The LTF dive investigation done by U.S. Fish and Wildlife Service and National Marine Fisheries Service biologists stated that for Crab Bay “the site has recovered well from the effects of past logging activities.” The Crab Bay LTF was used from 1977-1979 and was found to be productive with high diversity and biomass.

Bark debris accumulation varies from location to location as a result of many factors. Topography of the bottom, currents, exposure to storm action, method of log transfer, log handling techniques, bottom slope, and tidal wave action are factors which determine bark debris accumulation. In the preferred alternative, LTF sites selected are either previously used sites (Corner Bay, Crab Bay, and Inbetween) or barge facilities (Oly Creek). Approximately 5 to 10 acres of uplands are needed for sort yards and log storage areas to accompany LTFs. Vegetation will be removed from these sites to prepare the ground for the sort yard; however, after logging is completed, vegetation will recolonize the sites. There is expected to be little or no problem with bark accumulation at the LTFs that are barges. Impacts at the other LTF sites depend on the characteristics of the site. No site is expected to have a total and permanent loss of marine habitat.

3. **DOI, NMFS:** The EIS should describe specific areas and habitats that would be affected at each LTF site. The Draft EIS is inadequate in addressing only the areas that would be covered by construction fill materials and the specific areas of subtidal bark deposition in assessing impacts to marine and freshwater systems. We do not agree with equating the value of the marine environment area affected to a percentage of the total area. The effects on marine environment are determined by the value of the aquatic habitat impacted; not all habitats within a given estuary or bay are of the same value (e.g., destruction of a spawning area by filling or depositing woody debris is more damaging than if the activity were to affect a sandy beach with no life).

FS RESPONSE: We feel that the EIS adequately describes the affected areas. See Table 4-101 Final EIS. The Forest Service has consistently equated the value of the marine environment area affected to a percentage of the total area. Faris and Vaughan (1985) (para.4, p.8) state that the entire Inland Passage of Southeast Alaska can be called estuary or be divided into hundreds of smaller estuaries. We have chosen the latter as a baseline for our study since we have considered the local area around each LTF site and the effects on that area. The information on the marine life in the different LTF site areas was derived from the dive report (Appendix H, Southeast Chichagof FEIS). As stated in the report, and as a result, seasonal changes in habitat use (including fish and shellfish spawning occurrences) were not observed. This is the best information we have upon which to base our analysis of the effects on the LTF sites. However the depth of bark at an existing site which is to be reconstructed is expected to increase the actual area that covered by the bark will not significantly increase.

C. Threatened and Endangered Species (TES)

DOI: The TES discussion should include Arctic peregrine falcon, goshawk, harlequin duck, and several plant species (Aster yukonensis, Calamagrostis crossiglumis, Carex Lenticularis var. dolia, and Montia bostockii). The status of each ES should be discussed.

FS RESPONSE: Threatened and Endangered and Category 2 Species are discussed in detail in the Biological Assessment (Appendix F). The Biological Assessment includes an evaluation on the endangered American peregrine falcon, Aleutian Canada goose, Eskimo curlew, humpback whale; the threatened Arctic peregrine falcon, and Steller sea lion; the Category 2 animals, harlequin duck, marbled murrelet, Queen Charlotte goshawk; and the Category 2 plants, Aster yukonensis, Calamagrostis crassiglumis, Carex lenticularis var. dolia, and Montia bostockii.

D. Buffer Zones

SEACC, SCS: The treatment of buffers is not adequate. The inadequate ID approach leads one to wonder if the proposed variable buffers are adequate. The Draft EIS does not analyze measures to protect no-cut buffers from various hazards like windthrow. There is no evidence of field work to determine buffer widths.

FS RESPONSE: The streamcourse buffer prescriptions for this project were identified by the interdisciplinary team, which includes a soil scientist, hydrologist, fisheries biologist, silviculturist, and logging systems specialist. Factors considered in prescribing stream buffer widths included topography, windfirmness, timber and stand boundaries, and stream channel location. Additional information has been added to Table 4-52 that displays the reasons buffer strips often exceed the 100-foot minimum width required by the TTRA. The Unit and Road Design Cards have been updated for the Final EIS to include information regarding the protection of streamcourses as well as the identification of other Best Management Practices for protection of water and soil resources. The Integrated Silvicultural Prescriptions included in the Final EIS provide the direction for implementation of adequate stream buffers.

Further evaluation will occur at the time of harvest-unit preparation and road location (guided by the Unit and Road Cards and Silvicultural Prescriptions) to ensure that adequate stream and buffer protection measures are implemented. A Streamcourse Protection Plan (that will detail the requirements to protect the streamcourse and its buffer) will be prepared as a part of each harvest unit and road release to APC. Also

included in this plan is the requirement of whether or not and to what degree hazard trees (that must be felled within the buffer strip) should be left to provide for streamcourse protection.

VII. LTFs

A. Habitat Affected by LTFs

1. **EPA, DOI, NMFS:** The Draft EIS should contain a better discussion of how estuary and marine habitat are affected by LTFs. If data are not available, the FS should present a qualitative discussion. The Draft EIS seems to underestimate adverse effects on marine and estuarine habitats and does not adequately display direct or cumulative effects of construction operation of LTFs in bays, estuaries, and nearshore waters. It is meaningless to express effects of log transfer by loss of habitat from construction and operation of a LTF as a percentage of available surface area. Aquatic plants and animals only inhabit areas suitable for growth and reproduction; they are not evenly distributed over available land. Such references should be eliminated.

FS RESPONSE: Table 4-101 displays the estimated area affected by construction of LTFs and log rafts. The Forest Service has consistently compared the affected area with the total area. This is done because the areas suitable and unsuitable for aquatic plant and animal reproduction and growth are not inventoried; therefore, we cannot measure only the suitable areas of aquatic plant and animal reproduction. Faris and Vaughan (1985) state that the percentage of estuarine or cove covered by bark deposits from log transfer activities is based on an estimate of total area of estuary in Southeast Alaska. Information on habitat referred to in the EIS was derived from the dive report (See Appendix H) completed by the U.S. Fish and Wildlife Service and National Marine Fisheries Service for the Forest Service; this was adequate to assess effects for analysis purposes. Rockfill used in construction of the LTFs and bark from the logs that get into the water will create the impacts on the marine habitat.

2. **DOI:** The use of species diversity to compare and evaluate habitat values at LTFs is not appropriate and is misleading. The number of species observed at a site is not necessarily a good or valid indicator of the habitat value or “productivity” of a site. The data used to determine the “species diversity” of the sites was not determined by a uniform methodology. References to species diversity and alternative comparisons should be deleted.

FS RESPONSE: This information was derived from the LTF dive report that was compiled by National Marine Fisheries Service and U.S. Fish and Wildlife Service scuba dives on Inbetween, Crab Bay, and Oly Creek LTF sites in the fall of 1991 (see Appendix H). This report states (p. 5, para. 7) that observations were not made of seasonal changes in habitat use, including fish and shellfish spawning occurrences. The method of gathering information on all the sites was the same—a 100-meter transect was run from the water line seaward, and observations were made along the transect.

3. **NMFS, DOI:** Chapter 4, page 171 of the DEIS states that the length of time woody debris remains at an LTF after use is variable. It has been observed as long as 35 years. Chapter 4, pages 166-167 of the DEIS states that bark debris accumulation varies from location to location for many reasons, not just because of bottom slope and tidal and wave action.

FS RESPONSE: We concur with your comment. Bark has been observed as long as 40 years after a site has been inactive, and we realize that there are other reasons such as storms, currents, etc. that determine bark accumulation or lack of it.

4. **DOI:** Chapter 4, page 166 states that where site-specific information is not available direct impacts at LTFs would be estimated to be less than the average 1.96 acres reported earlier. We recommend the average reported in literature be used (i.e. 1.4 acres [Freese, J.L. 1987. Factors Affecting Benthic Deposition of Bark Debris at 13 Log Transfer Facilities in Southeastern Alaska, NMFS, Juneau, AK.], or 1.96 acres [Faris, T. and K. Vaughn, 1985. Log Transfer and Storage Facilities in Southeast Alaska, Tech. Report PNW-174, USDA, Portland, OR.]).

FS RESPONSE: Comment noted. Corrected to read an average of 1.96 acres.

5. **DOI:** Table 4-101 indicates no species count is on record for the Corner Bay site. Corner Bay is one of the most studied LTF sites in Southeast Alaska. We are also unaware of any classification system that would permit differentiation between marine and estuarine habitats in small contiguous areas (i.e. less than 2 acres); yet, Table 4-101 does so. We suggest an explanation or correction.

FS RESPONSE: Comment noted. Corrective action has been taken (see Table 4-101). Corner Bay is an existing and operating LTF; therefore, no dive was accomplished in the fall of 1991 and no species count gathered.

6. **TENSP:** The loss of marine habitat at proposed LTFs is being accepted because identified species are common throughout Southeast; this disregards traditional subsistence use and present commercial activity.

FS RESPONSE: The impacts on the marine habitat will be relatively minor since we are proposing to reuse LTF sites that have already been affected. We are, therefore, not affecting new areas in Tenakee Inlet. The impacts to subsistence and commercial activity also will be minor.

B. Specific LTFs

1. **EPA:** The Corner Bay LTF should be identified as estuarine rather than marine since it is located at the mouth of a stream. Is use of Corner Bay LTF essential given that helicopters could release logs directly into Corner Bay (2-11)?

FS RESPONSE: Corner Bay LTF meets and exceeds LTF siting guide S-1, which states that an LTF should not be within 300 feet of the mouth of an anadromous fish stream. We concur that Corner Bay is an estuarine not marine and have removed the reference that Corner Bay is marine. Corner Bay LTF is existing and operating with a road system in place. Helicopter release of logs directly into Corner Bay would be expensive and would cause more bark to be introduced into the water. To be economically feasible, helicopter logging requires flight lengths of a maximum of one mile between unit and landing. The closest proposed units to Corner Bay would be marginal at best.

2. **NMFS, DOI:** The Draft EIS gives the impression that Crab Bay and False Bay LTFs are built; this is not the case. The Department of Army permit is valid, but the facilities are in disrepair. Construction of a low-angle slide will require modification of the existing permit. 4-189: The low-angle slide at the False Island LTF has not been built. All references to low-angle slide LTFs being constructed at Crab Bay and False Island should be corrected to state that the intent is to construct such a slide at these facilities and note that the FS has not received required authorization under Section 404 of the Clean Water Act to do this. The Fish and Wildlife Service, NMFS, EPA, and ADF&G are on record as requesting denial of the proposed project.

FS RESPONSE: The False Island LTF has been reconstructed as a bulkhead with an A-frame. A correction in the FEIS has been made to indicate that False Island will be a bulkhead with a A-frame entry system. Crab Bay LTF is in need of reconstruction as stated on 4-161 of the Final EIS. The Forest Service will be seeking a change in the Army Corps of Engineers permit to reconstruct this LTF as a low-angle slide since it is currently permitted as a beaver slide (steep angle slide). False Bay LTF is not in the Project Area; therefore, it has not been discussed in this plan.

3. **NMFS:** 3-121: Department of the Army authorization is needed before an LTF can be constructed at the Tenakee Inlet 27 location in Trap Bay.

FS RESPONSE: Comment noted.

VIII. MISCELLANEOUS EFFECTS

FIKLC, TENSP: Study the impacts of noise pollution, air traffic, log rafts, and loose, unsalvaged logs.

FS RESPONSE: The noise from the logging operations is a recognized effect that is discussed in the *Recreation* section of Chapter 4. Air traffic, log rafts, and loose logs are not discussed specifically in Chapter 4. Each of these are expected to continue at the levels generated by current operations. This is because the timber volume made available as a result of this EIS will simply keep timber harvest activities in the Project Area at existing levels.

Specifically, air traffic is not expected to increase over existing levels at Corner Bay and False Island. The only exception to this is helicopter activity associated with planned helicopter logging in the Corner Bay and Kook Lake areas. This helicopter activity is very localized since the distance logs are hauled is less than one mile (average is approximately 0.6 mile) (Lilly 1992).

Log rafts and the potential for loose logs are not expected to increase over existing levels in Tenakee Inlet and Peril Strait. In addition, State and Federal laws, regulations, and directions guide these activities in order to prevent unacceptable impacts.

IX. MITIGATION/MONITORING

A. Monitoring

1. EPA: What are the recourses if prescriptions are not implemented correctly? Why must the FS complete implementation of effectiveness monitoring by December 1992? Are there models to support effects assumptions used in the Draft EIS for validation monitoring? The Draft EIS should include a timetable for monitoring.

FS RESPONSE: One of the major reasons we do monitoring is to check the implementation against the prescriptions. If it is found that the prescriptions are not being implemented correctly, then corrective direction is issued and checked again to ensure compliance. The Forest Service needs to complete its effectiveness monitoring each calendar year since the results of that monitoring are necessary to evaluate the need for further training of the district personnel or a verification of the direction that the Forest Service has implemented. Each of the models used in estimating the effects of actions are available. Proportionality, silviculture, windfirmness of unit boundaries, stream crossing, deer and bear wildlife models, and a cultural model to estimate probability are all available for updating during the validation monitoring. These models are all maintained at the Regional level, and the results of monitoring will be forwarded to the Tongass Land Management team for further analysis. Because of the variability allowed in scheduling the harvest activities, a timetable for monitoring is not included.

2. SEACC, SCS, EPA, DOI: Monitoring in the Draft EIS is inadequate. Given the inadequate ID process, the FS reliance on unit cards to be the basis for determining if monitoring recommendations were implemented seems arbitrary. Also, it is not enough to list implementation monitoring activities which the FS expects to take place. Monitoring is not a discretionary responsibility but rather, by law, must be implemented. A greater number of projects should be monitored than proposed (proposal to spot-check 20 percent of units near anadromous fish streams to demonstrate compliance with TTRA buffer requirements seems far too low to ensure compliance; also, how was 20 percent chosen?). Validation monitoring belongs in Area or District, not at the Regional office. A significantly greater number of projects should be monitored than proposed.

FS RESPONSE: The monitoring plan displayed in the Draft EIS is more than adequate to measure the effects of this timber sale on the Project Area. We disagree with the statement that the interdisciplinary process was inadequate. This EIS has had the most comprehensive interdisciplinary team process on the

Chatham to date. Two seasons were spent in the field; almost every unit has been visited by either the core team or the extended team. A majority of the road corridors have been walked and crossings identified. The Chatham Area is developing a monitoring plan for the area. (See FS RESPONSE IX.A.1 in relation to monitoring). We agree that the validation monitoring will occur at the District or Area levels, but the actual correlation of that data to the models will take place at the Regional level. A 20 percent sample provides a reasonable index for the monitoring activities. This is also the percent sample required in the Kelp Bay ROD and was selected in this EIS to provide consistent direction to the field.

3. **EPA:** Responsible staff listed for monitoring includes several different individuals. This could make recovery of results difficult. We suggest there be a monitoring leader for the project or for the entire Chatham Area.

FS RESPONSE: The Forest Supervisor has assigned the overall monitoring responsibilities for the area to the Planning Staff Officer.

B. Mitigation

1. **DOI:** No specific mitigation plan is offered to avoid and minimize adverse impacts on marine and estuarine areas directly impacted by proposed development. The FS should provide one.

FS RESPONSE: The BMP 14.4 (Location and Design of Log Transfer Facilities LTFs) will be adhered to during the development of LTFs. The Alaska Timber Task Force Log Transfer Facility Guidelines (1985) specifies additional guidelines for siting, design, construction, and monitoring of LTFs. Both of these sets of mitigation measures were designed to avoid and/or minimize adverse effects on marine and estuarine areas.

In addition, the monitoring plan described in Chapter 2 of the EIS covers LTF removal and bark accumulation at LTFs. The results of these monitoring activities will be used to verify implementation and effectiveness of selected mitigation and protection measures in a timely manner.

2. **SEACC:** The FS should present a detailed, site-specific mitigation and monitoring program and timetable for each alternative. In addition, the following measures should be added:

- 1) Restriction of activities near salmon streams during spawning season and near eagle nest trees during sensitive nesting and rearing times
- 2) Schedule of timber cutting to avoid important subsistence seasons, and making subsistence use patterns a major criteria for the selection of roads and cutting units
- 3) Prevention of the use of roads for access for hunters, trappers, and fishermen by establishing an effective road closure program in the Project Area
- 4) Strict prohibition of hunting and fishing by logging company employees and agency staff in the Project Area—a policy that is in place at the Greens Creek Mining Project on Admiralty Island.

FS RESPONSE: The specific mitigation measures applicable to the Southeast Chichagof Project Area include direction, standards, and guidelines contained in the Alaska Regional Guide, the Tongass Land Management Plan, applicable Forest Service manuals and handbooks, and 40 CFR [1502.14(f), 1502.16(h)]. In addition, the mitigation measures applicable to all alternatives are specified in Chapter 2 of the EIS.

The Record of Decision (ROD) documents the decision of the Forest Supervisor as to what specific actions will be taken in the Southeast Chichagof Project Area. These specific actions may result in the need for additional mitigation measures. These mitigation measures may be 1) the result of specific public comments received on the Draft EIS, 2) the result of additional information or analysis acquired during the completion

of the Final EIS and ROD, or 3) the result of a particular combination of actions planned for the Project Area. Additional mitigation measures identified at this time will be described in the ROD.

In response to the specific suggestion for mitigation through the restriction of activities near salmon streams and near eagle nest trees, we refer the reader to the section on *Water and Fish* in Chapter 4. Further, the EPA has determined that the reasonable implementation, application, and monitoring of BMPs achieves compliance with the Clean Water Act (Forest Service 1991b). Water quality studies conducted in Southeast Alaska indicate that, except for short-term localized deviations from numerical standards, BMPs are effective in maintaining sediment concentrations within State water quality standards (Paustian 1987). Finally, passage of TTRA requires the maintenance of a buffer zone of no less than one hundred feet in width on each side of all Class I streams and on those Class II streams which flow directly into a Class I stream. This requirement augments existing direction in the Aquatic Habitat Management Handbook and the Soil and Water Conservation Handbook.

Regarding eagle nest trees, the EIS specifically states that management activities within 330 feet of an eagle nest site are restricted by a Memorandum of Understanding between the Forest Service and the U.S. Fish and Wildlife Service (Chapter 4, *Wildlife*). It says that other measures to mitigate impacts include scheduling of harvest activities which reduce disturbance to bald eagle nesting and rearing activity (Chapter 2, *Mitigation Measures*).

In response to the specific suggestion to avoid important subsistence seasons and areas, the reader should review Chapter 2, which includes a description of alternative development. It states that alternatives were developed which explore ways to satisfy public concerns and resolve the issues (including subsistence). It also identifies the guidelines used in selecting units and roads for each alternative. For example, Alternative F included the guideline to avoid significant subsistence use areas as identified in the Tongass Resource Use Cooperative Study. In addition, the actual delineation of harvest units and road corridors was accomplished within an interdisciplinary process that included a subsistence specialist.

In response to the specific suggestion to prevent the use of roads by establishing an effective road closure program in the Project Area, it is recommended that Appendix I be reviewed, specifically the RMOs for each alternative. Each road is assigned a post-harvest traffic strategy (Encourage, Accept, Discourage, Eliminate, Prohibit, or Prohibit Seasonally).

In response to the specific suggestion to strictly prohibit hunting and fishing by logging company employees and agency staff, there has been no showing that such prohibition is needed. Further, neither Kelp Bay nor Greens Creek (as suggested) has such a requirement. Greens Creek has a restriction on transportation of guns, traps, or fishing equipment on company transportation. Kelp Bay has a similar restriction on the use of company-owned or Forest Service vehicles for personal use (including use for hunting and/or fishing). In either case, there is no restriction on the subsistence activities of these employees when they are in off-duty status.

Finally, it is important to recognize that the mitigation measures applicable to all alternatives are specified in Chapter 2 of the EIS. These mitigation measures were applied to all alternatives. The application of these mitigation measures to all alternatives allowed accurate evaluation of the effects of the proposed actions.

3. **RAP:** The Draft EIS lacks specifics on mitigation of subsistence impacts.

FS RESPONSE: The *ANILCA Section 810 Evaluation* in Chapter 4 concludes there may be a significant restriction on the subsistence use of deer in the Project Area. The Federal Subsistence Board has the authority to regulate the deer harvest to ensure traditional subsistence users have preference. Mitigation measures common to all alternatives are addressed in Chapter 2 of the Final EIS.

Units and roads were purposely kept 500 feet from the shoreline and 1000 feet from estuaries (where possible) to protect important wildlife habitat and subsistence use patterns. Subsistence use patterns were a

major factor in the design of Alternatives E and F. Most timber harvest activity will take place between May and September. Because of limited operating seasons in Southeast Alaska, it is difficult to schedule shorter operating periods than what the weather will allow. Appendix I of the Final EIS contains the RMOs, which reflect the closure status of roads contained in high subsistence use areas.

See the section in Chapter 2 entitled *Mitigation Measures* for clarification on hunting and fishing restrictions. Alaska Department of Fish and Game and the Federal Subsistence Board have the authority to regulate hunting and fishing seasons to accomplish wildlife population objectives or ensure subsistence preferences.

X. ROADS

A. Negative Impacts of Roads

JMM, LCC: Roads will create easy access for motorized hunting and be detrimental to deer population and to villagers who hunt by hiking. Road building has greater negative effects on primitive and semiprimitive recreation than shown in the Draft EIS. Impacts extend beyond 5 acres to directly impacted soil for each mile of road constructed. Roads will result in increased poaching.

FS RESPONSE: Road management prescriptions have been developed for each spec road to manage and control vehicle access and to set maintenance levels that seek to prevent deterioration of the roads. Using BMPs and adhering to TTRA buffers along streams will keep sedimentation to a minimum, thereby maintaining water quality and habitat for fish. Natural, large, woody debris is not removed from streams since it produces resting and spawning pools for salmon. The road systems in the Project Area are not directly accessible by the Alaska Marine Highway as is the road system on Northeast Chichagof; therefore, motorized traffic will be limited to that which is brought in by timber operators and a few hunters who bring in ATVs on their boats. We have no information that roads not connected directly to communities would cause increased poaching. Villagers who hunt by hiking would benefit from roads because it would allow them to access areas deeper in the forest and open new hunting areas for them.

B. Permanent Roads

1. **TENSP, DMZ, FIKLC:** Permanent roads have not been justified. Close logging roads to recreational vehicles during logging operation and permanently close roads when logging is finished.

FS RESPONSE: Road Management Objectives address all permanent road management and their status (see Appendix I). Permanent roads are needed to manage and protect resources over a long period of time in an economical manner. Access management on permanent roads ranges from discouragement to acceptance of public traffic. Most of the road system will be maintained for high clearance (4-wheel drive) vehicles only, from five years after harvest is completed until the next entry.

2. **AMG:** If the FS must cut in VCU 242, close the road (after the logs are removed) that runs along the north shore of the bay from the point at the head of the bay to False Island. This will help preserve Sitkoh Bay.

FS RESPONSE: The road management for this road is discussed in Appendix I. Management ranges by alternative from discouragement to encouragement of public and recreation traffic. Preserving subsistence and recreational use in Sitkoh Bay was considered in each alternative in light of existing and future management needs.

3. **SCS:** We oppose the road linking VCUs 246 and 233.

FS RESPONSE: Comment noted.

C. General

SCS: None of the Road Cards have recommendations as to how Class I and II streams should be crossed.

FS RESPONSE: Comment noted. Corrective action taken.

XI. SUBSISTENCE

A. Subsistence Alternative

RAP, SEACC, TENSP, DMZ, FIKLC: The FS should present a subsistence alternative to adequately take into account subsistence needs. This Draft EIS does not present an adequate alternative in this regard. Predictions of impacts to subsistence are understated in the Draft EIS. Major reductions in deer populations are being accepted without regard to traditional use areas.

FS RESPONSE: Subsistence uses and needs are discussed in detail in both Chapter 3, *Affected Environment*, and in Chapter 4, *Environmental Consequences*. Formal and informal meetings have been held with individuals, communities, and organizations during the EIS process to gain an understanding of subsistence concerns. These subsistence concerns were taken into consideration in the development of alternatives and analyses. Subsistence information gathered at meetings held since the release of the DEIS is passed on to the decisionmaker and will be utilized in making the final decision. This information will also be incorporated into the Record of Decision (ROD).

The Forest Service feels there are enough options displayed in the existing alternatives for the decisionmaker to adequately take subsistence needs into account. Alternative E and F in particular avoided subsistence use areas in the selection of timber harvest units.

Predictions of impacts to subsistence are analyzed utilizing the best available data (deer habitat capability models, GIS, TRUCS, and ADF&G deer hunter survey). Effects are displayed with maps, tables, graphs, and written text. The predictions are not understated. The analysis may, indeed, underestimate the importance of the Project Area to Angoon since Angoon's deer harvest is reported by ADF&G Subsistence Division to be higher than the ADF&G deer hunter survey summary statistics indicate. To be consistent with the subsistence analysis of the other communities, Angoon's deer harvest was not inflated. However, this discrepancy in the data was considered in the subsistence findings and discussed in the text of the Chapter 4 analysis.

Using the TRUCS database, extensive efforts have been made to display traditional subsistence use areas (historical clan boundaries) and more recent subsistence deer hunting areas. In addition, maps with subsistence deer hunting areas are displayed by alternative for each of the communities analyzed. Therefore, traditional use areas have been considered in the analysis. Deer populations are expected to be reduced because of habitat changes that have occurred as a result of clearcuts. However, habitat changes do not, in or by themselves, equal population changes. The DEIS determined that the Habitat Capability Model information projects that less than a 2 percent reduction in deer numbers may be expected from the proposed timber harvest alternatives. It is recognized that this may affect the subsistence resource and may call for mitigation. Possible mitigation includes reduction in the deer hunting by nonrural hunters.

B. Angoon/Tenakee Springs/Sitka

JMM, SEACC, TENSP, ANGN: The Draft EIS does not adequately address subsistence needs of and impacts of timber harvest on Angoon and Tenakee Springs. We oppose cutting in Tenakee Inlet because of the subsistence impact. Angoon's harvest of and its need for deer is grossly understated in the Draft EIS. Broad Creek and Broad Finger Creek are important subsistence areas for Sitka.

FS RESPONSE: The subsistence effects analysis was a cooperative effort between the Forest Service, Alaska Department of Fish and Game (ADF&G) Subsistence Division, and Jack Kruse of the Institute for Social and Economic Research (ISER) (which utilized the best data available). Data used in the analysis included the Tongass Use Cooperative Study (TRUCS) data base and ADF&G deer hunter survey harvest data. To be consistent, the impacts to the subsistence resource for Angoon and Tenakee Springs are analyzed in the same way as the impacts to the subsistence resource for the communities of Haines, Hoonah, Kake, Meyers Chuck, Petersburg, Sitka, Skagway, and Wrangell. The analysis of the effects to subsistence for Juneau and Ketchikan does not include TRUCS data since no TRUCS data is available for these communities. The subsistence effects analysis in the Southeast Chichagof EIS is far more extensive than any previously done, and for purposes of reaching this project division it adequately addresses subsistence needs and impacts to those communities that utilize the Project Area for subsistence food gathering.

The Forest Service acknowledges the importance of the subsistence resource to the communities of Angoon and Tenakee Springs. Throughout the process, we have worked closely with the Southeast Native Subsistence Commission (SENSC) to solicit specific areas of concern from the communities of Angoon, Sitka, and Tenakee Springs. In addition, we recognize the impact that the timing of the subsistence hearings may have had on Angoon's and Tenakee Springs' participation and we, therefore, scheduled hearings and open houses in each of those communities during two different weeks to encourage more participation in the process.

Impacts falling within the scope of "customary trade" were analyzed as part of subsistence uses.

The Forest Service acknowledges opposition by some publics to harvesting timber in Tenakee Inlet because of subsistence impacts. The analysis incorporates the best available data to assess and display effects to the subsistence resource.

It is recognized that there is under-reporting of deer harvest on ADF&G deer hunter surveys by Angoon residents and that this under-reporting has an impact on the analysis as it is reflected in the EIS. We have attempted to compensate by considering this in the written text of the effects analysis and in the subsistence findings as they relate to Angoon.

C. Subsistence on SE Chichagof

LCC: The southeast shore of Chichagof Island must be protected so subsistence needs will continue to be met and fishing livelihoods will not be jeopardized. Hunting and fishing resources mean food when funds might be scarce during long winters. Especially stay away from Hoonah Sound. Timber harvest will have negative impact on Sitka black-tailed deer, adversely affecting subsistence.

FS RESPONSE: Only VCU 246 in Peril Strait has proposed timber harvest units. No harvest is planned in Hoonah Sound in this plan. In addition, most of Hoonah Sound is designated as LUD II, which precludes harvesting timber. There are relatively few units proposed for the Chatham Strait section of the Project Area and these are at least one mile interior from the Chatham Strait shoreline. The majority of the proposed units are in the Tenakee Inlet section of the Project Area. Units in this area are no closer than 1/4 mile from salt water. Critical deer winter range beach fringe habitat is not disturbed. Measures have been taken to avoid harvest in riparian habitats and critical deer winter range. The resulting reduction in deer numbers projected by the habitat capability model is less than 2 percent for all alternatives.

D. Data/Maps

SEACC: Maps and charts from TRUCS survey have some inaccuracies that need correcting.

FS RESPONSE: Mapping and chart inaccuracies were noted and corrected.

E. RAP: It is not an acceptable assertion that the Project Area's remoteness makes it very unlikely that an individual household or even an entire community is highly dependent on specific areas within the Project Area that may be affected by the proposed action.

FS Response: Comment noted and statement deleted from FEIS.

XII. TIMBER

A. APC Needs

1. **APC:** No alternative is acceptable to APC. APC would like to see an alternative that mixes units from the various proposals to come up with around 130 MMBF on less than 50 miles of new road with minimal construction of new roads. Insufficient volume from the FS the past year has forced APC to cut the sawmill from two shifts to one. Heavy use of Alaska yellow cedar (AYC) would make APC's volume requirements even harder to meet. AYC provides no sawlog volume, and the price fluctuates rapidly from month to month allowing for questionable return. The only way for APC to obtain economic volume is for the FS to provide better timber recovery per mile of road constructed. APC needs 65 MM of sawmill quality logs per year to run the Wrangell mill; AYC cannot be used. The majority of volume on SE Chichagof is pulp quality and will go to Sitka; in order to keep pulp mill and sawmill supplied, the FS needs to provide economic timber.

FS RESPONSE: A range of alternatives was developed that responds to the issues identified from public comment and Forest Service interdisciplinary team analyses. Each action alternative was designed to help the Forest Service make timber available to comply with the APC Long-term Contract and to emphasize one or a combination of the various identified themes that included noncommodity as well as commodity considerations. This was done in order to provide a broad range of choices for the public and deciding official. Alaska yellow-cedar is a component of the proposed harvest in the Southeast Chichagof Project Area. Thus, yellow-cedar must also be included in the analysis of the proposed actions.

Midmarket assessment of each of the alternatives was performed as described in Chapter 4 and indicated that four of the five action alternatives would be economical offerings. The volume and logging characteristics used in the midmarket assessment were based upon site-specific data gathered in the proposed harvest units and from recent timber cruise reports for SEIS offering areas within the Southeast Chichagof Project Area. Per Forest Service handbook direction, it was decided that it would be more appropriate to use these project-specific, on-the-ground estimates rather than the average guideline characteristics for Baranof, Chichagof, and associated islands displayed in the R10 Supplement to the Sale Preparation Handbook, 2409.18-91-1, effective July 22, 1991 (same as the data that was in Section 7c, 4.e. of the July 1, 1990 version of the APC Long-term Contract).

2. **SEACC, TENSP:** The FS's rationale that a 3-year standing timber supply is required is flawed. TTRA did not mandate anything more than that timber offered to APC be harvested within 3 years. The Draft EIS assumes the FS must supply APC beyond the contractual obligation; this affects objectivity in evaluating the rate and timing of cut in specific VCUs. Sale Plan is contingency area and should not be proposed because:

- There are already areas given to APC that remain uncut.
- There are areas in the contract area not being developed or proposed for development.
- The use of contingency areas is being abused.

FS RESPONSE: There is language in the Long-term Sale Contract (Section B0.62) that requires the Forest Service to seek to maintain a minimum three-year current timber supply. As required by Contract Section B0.65, the projection of the volume needed for the current timber supply is scheduled at 240 MMBF for the next four years and a minimum of 360 MMBF by December 31, 1995. Refer to Appendix A in the Final EIS for more information regarding the timber supply.

The Draft EIS assumes that timber harvest in the Southeast Chichagof Project Area would continue to occur beyond the year 2011 for cumulative impacts analysis, not necessarily to supply APC.

The Southeast Chichagof Project Area lies within Allotments B and A-1 described in Contract Section B0.3 as part of the sale area. Since the authorization of the APC contract in 1956, several laws have changed the land base from which the authorized timber could be removed. Thus, in order to meet the contract volume requirement of 4,974 MMBF, it has become necessary to designate cutting areas in each of the allotment areas within the APC Contract Area.

B. Timber Economics

APC: Helicopter volume harvest needs to wait for the market to improve before making an offering with helicopter volume in it. The economic assessment would have been better made by using the data in the mid-market section of the APC July 1, 1990 contract. The Draft EIS analysis ignores the allowance for profit and risk as a cost. The only way for APC to obtain economic volume is for the FS to provide better timber recovery per mile of road constructed.

FS RESPONSE: The Midmarket Assessment for the Southeast Chichagof Project alternatives was performed as directed in R-10 Supplement No. 2409.18-91-1 of the FSH 2409.18—Sale Preparation Handbook. The factors used in calculating the estimated timber values were based on those factors in effect as of the NEPA start date, May 2, 1990 (the date that the Notice of Intent for the project was issued). The assessment was performed using site- and Project Area-specific volume and stand characteristics instead of the guidelines for these characteristics as displayed in the R-10 Supplement. Sixty percent of normal profit and risk was used in the midmarket assessment since this is the minimum margin for profit and risk that must be met in order for the sale to be considered an economical offering. Four out of five of the action alternatives in the Final EIS were determined to be economical offerings. Proposed harvest with helicopter was included at various levels in each of the four economical offerings.

C. Clearcutting/Timber Harvest Emphasis

1. RAP, LCC, SCS, DS, HMD, AH, TENSP: Clearcutting/timber harvest appears as the priority for the FS in this Draft EIS. It is time for the FS to stop endorsing clearcutting. It should use selective cutting instead. The FS should be managing resources with a multiple-use goal. We object to considering that clearcuts are no longer openings after the regrowth is 5 feet tall. Only biological and habitat considerations should be applied when determining when clearcuts are no longer clearcuts.

FS RESPONSE: Refer to the discussion in the *Timber* section of Chapter 4 for a discussion of the selection of clearcutting as the primary harvest method for the Southeast Chichagof Project as well as the discussion of areas identified for the partial removal of timber. A range of alternatives was developed to address the issues identified by the public and Forest Service which involve different approaches to providing a balance of commodity and noncommodity uses. An opening as defined by the National Forest Management Act of 1974, the TLMP (current and Revision), and the Alaska Regional Guide, is no longer considered an opening when the regeneration is at least 5 feet tall for purposes of locating a proposed clearcut adjacent to a previously harvested unit.

Other considerations were applied in the location of proposed harvest units relative to one another and to existing harvest in the design of the proposed actions. Visual quality impacts, wildlife habitat requirements, watershed protection needs, subsistence impacts, recreation, and soils considerations were applied as well as economic considerations in the location of harvest units for this project. Refer to the alternative development and descriptions sections in Chapter 2 and the Alternative Maps for location of harvest units, past and proposed.

2. EPA, SCS: The Draft EIS should take into account the new FS policy on clearcutting.

FS RESPONSE: The selection of clearcutting as the primary method of timber harvest for Southeast Chichagof was evaluated and is consistent with the Chief of the Forest Service's direction to reduce the amount of clearcutting on National Forest lands (June 4, 1992 letter to Regional Foresters and Station Directors). Clearcutting is the optimal method of timber harvest for this project and is essential to meet Forest Plan objectives and long-term sale volume requirements in order to:

- 1) Minimize the occurrence of potentially adverse effects from dwarf mistletoe (prevalent in the Project Area) infestation upon regeneration
- 2) Minimize the effects of windthrow, for which there is a generally high risk of occurrence in the Project Area
- 3) Provide for the establishment and growth of Sitka spruce and Alaska yellow-cedar that are shade-intolerant species

However, opportunities were identified with this project for timber harvest methods that involve partial or selective removal of trees. Refer to the discussion of Silvicultural Systems in the *Timber* section of Chapter 4 and the Integrated Silvicultural Prescriptions in Appendix L of the Final EIS for more information.

D. Proportionality

SCS, SEACC: Proportionality is not being followed. Detailed cruising of potential cutting units has not been done. Lumping Volume Classes 6 and 7 together is improper; TTRA treats them as separate and distinct. Volume Class 7 is rare in the Project Area and should not be cut at all. We question the agency's compliance with the proportionality requirement. Objections in Appeal #92-13-00-0082 apply and should be included as part of SCS and SEACC's comments on this Draft EIS.

FS RESPONSE: The Forest Service disagrees with the assertion that the TTRA proportionality requirement is not followed. Direction contained in Forest Service Handbook 2409.18, Region 10 Supplement No. 2409.18-92-5 was followed in the projection of this project's compliance with the TTRA proportionality requirement. The basis for proportionality analysis is the TIMTYP map of the Forest Service's Geographic Information System (GIS). TIMTYP is the timber resource base used by the TLMP that displays, among other things, the inventoried volume class distribution of the Forest. It is not necessary to perform a detailed cruise to redefine the volume class distribution of a project area. Per handbook direction, Volume Classes 6 and 7 are combined for the purpose of TTRA implementation. The proposed harvest units were entered into GIS and combined with TIMTYP to determine the volume class distribution within the harvest boundaries and to calculate proportionality. Each of the project's action alternatives were determined to be in compliance with the proportionality requirement of the TTRA. After the harvest of a unit, the actual boundary locations will be overlain with TIMTYP and the final determination of proportionality will be made.

Objections raised in Appeal #92-13-00-0082 are specific to the Kelp Bay Project and may not be incorporated by reference in comments for the Southeast Chichagof Draft EIS.

E. General

1. **SCS:** We object to further logging in VCU 246.

FS RESPONSE: Comment noted. The Draft EIS displays a range of alternatives that involves a variety of harvest levels within VCU 246, including no harvest.

2. **KP:** Timber harvest on public lands must not be subsidized by U.S. tax dollars. We must stop using Alaska to supply timber to Japan. Timber harvest from the Tongass should be processed completely in Alaska so that local economies receive maximum benefits.

FS RESPONSE: The Tongass National Forest timber program is part of a long-term effort among the Federal government, the State of Alaska, and local governments to provide greater economic diversity and stable employment opportunities in Southeast Alaska. Section B0.13 of the APC Long-term Contract requires that the primary manufacture of timber harvested from National Forest lands be performed in Alaska, except for yellow-cedar, which may be exported as unprocessed logs under certain conditions. Currently, the facilities for the complete processing of these wood products within Alaska do not exist, and there is no market to send unprocessed or partially processed wood to the lower 48 states for complete processing. At present, the market for wood products from Alaska is in the Pacific Rim countries, such as Japan and Korea.

XIII. WATER QUALITY/FISHERIES

A. Water Quality

EPA, SEACC: Water quality and fisheries effectiveness monitoring is not included in the Draft EIS. Lack of inclusion precludes reviewers from influencing its scope and extent. The Draft EIS should include types of surveys, location, and frequency of sampling, parameters to be monitored, indicator species, budget, procedures for using data, and availability of results to interested and affected groups. It should present feedback mechanisms. We are unable to determine how the alternatives will be consistent with the sediment standard. The FS must demonstrate in advance that timber harvest and road construction will not cause beneficial use impairment and will not exceed standards. EPA believes the project could exceed Water Quality Standards so that the fisheries beneficial use will not be fully maintained, thereby violating Federal antidegradation policy. The Final EIS needs to integrate Section 319 of Clean Water Act. Existing water conditions in NEPA documents needs to reflect and reference the State's water quality assessment. The project must be consistent with the State's NPS program.

FS RESPONSE: Fisheries buffer prescriptions will be monitored through the Unit Cards, unit layout records (changes are made on unit addendums called white sheets which are signed by the District Ranger and Forest Supervisor), harvest unit releases, and the sale folder. This monitoring covers the time period from when the unit is planned to after it is harvested.

Best Management Practices (BMPs) are designed to meet and maintain State water quality standards. The Forest Service cooperatively works with the Alaska Department of Environmental Conservation (DEC) under a Memorandum of Understanding (MOU) relative to BMP monitoring.

The Chatham Area (CA) is in the process of developing a BMP effectiveness monitoring plan. Steve Paustian is the area contact for this plan. Inputs and comments on this document can be made through Steve Paustian, CA Hydrologist. Part of this effectiveness monitoring plan monitors the effectiveness of buffers in maintaining fish habitat.

The CA 1992 monitoring Plan-of-Work includes implementation and effectiveness monitoring. The four effectiveness monitoring study questions that have been approved through the CA Information Needs Assessment (INA) for BMP monitoring are: 1) using macroinvertebrates to help monitor the effectiveness of mining oriented BMPs, 2) evaluating buffer strip blowdown and the effectiveness of buffers in protecting channel and fish habitat integrity, 3) evaluating the effectiveness of road drainage, culvert design and maintenance in maintaining fish passage and water quality conditions, and 4) evaluating the effectiveness of timber harvest and road BMPs in limiting the occurrence of significant (> 10 cubic yards) mass-wasting events. The effectiveness monitoring plan presented in the EIS has sufficient detail to ensure that the impacts to water quality have been evaluated.

BMPs are the primary tool on the Tongass National Forest to mitigate the effects of logging activities on water quality. Two sediment monitoring studies conducted by Steve Paustian in the Indian River and

Kadashan watersheds on Chichagof Island were designed to gather quantitative sediment yield data to evaluate the effectiveness of forest management BMPs in meeting water quality goals. These studies concluded that “under typical conditions represented by the Indian River and Kadashan study sites, BMPs were successful in preventing or minimizing sediment inputs from logging and road building to levels that are probably within the range of natural sediment yield.” The studies also concluded that “some short-term degradation of water quality from increased turbidity and suspended particulates is unavoidable, particularly during road building.” In summary, the studies concluded that overall road construction does not exceed long-duration standards.

The Forest Service position is that harvest activities controlled by BMPs and monitored for effectiveness will not exceed State water quality standards and will not violate Federal anti-degradation policy. Continued monitoring and evaluation of BMPs will assure that water quality standards are being met.

B. Streams, Lakes, Rivers, etc.

JMM, RAH: Stay away from the following: Kadashan, all sockeye lakes and streams (i.e., Sitkoh Lake), Crab Bay, Goose Flats, Saltery Bay.

FS RESPONSE: There are no scheduled activities planned on the southeast coast of Chichagof Island, Kadashan, Sitkoh Creek, and Sitkoh Lake. There are not any planned activities for Goose Flats and Long and Seal Bay. Crab Bay (VCU 233) and Saltery Bay (VCU 233) are both VCUs with a LUD IV designation. This allows us to schedule harvest in these VCUs, and this has been done in various alternatives.

XIV. SPECIFIC PAGE REFERENCE ISSUES

A. EPA

1. Page 1-11: LUD III emphasizes biological values more than LUD IV. VCU 236 is LUD IV; 239 is LUD III. Yet Alternatives C through F include more acres of logging on VCU 239. Also, high hazard soils will be harvested in VCU 239. This apparent contradiction should be explained.

FS RESPONSE: VCU 236 currently has 20 percent of its land area harvested. VCU 239 currently has 12 percent of its land area harvested. Under the various alternatives, VCU 236 would increase by as much as 4 percent for a total area harvested of 24 percent; VCU 239 increases by 5 percent for a total harvest area not to exceed 17 percent. Even though VCU 236 cumulatively harvests more acres than VCU 239, VCU 239 is much larger and the overall impacts are less.

2. Page 2-34: Risk rating of sediment delivery potential for Alternative E is the second highest of the five alternatives. This seems inconsistent with the theme to reduce the effects of proposed activities on water, fisheries, etc. for this alternative.

FS RESPONSE: The central theme of Alternative E is to focus activities away from salmon streams, lakes, salt water, and riparian areas and concentrate activities in higher elevations and upper valleys. One of the consequences of focusing activities higher up in the basin is to increase the risk of sediment potential. This is caused by operating on a higher percent of high hazard slopes.

3. Page 4-64: Is use of acres of high hazard soil as a basis for comparing risk of sediment delivery potential for alternatives based on field verification.

FS RESPONSE: All of the data presented in the Draft EIS in relation to soil originated in the GIS, and is not based on field verification. An attempt was made throughout the field work to visit those areas designated as high hazard soils and determine what mitigation measures would be needed if the area was harvested.

4. The statement "...the EPA has determined that the reasonable implementation, application, and monitoring of BMPs achieves compliance with the intent of the Clean Water Act" could be misinterpreted and should be rephrased.

FS RESPONSE: We disagree. The EPA, Water Quality Standards Handbook, 1983, states: "Proper installation, operation and maintenance of State approved BMP's are presumed to meet a landowner's or manager's obligation for compliance with applicable water quality standards." The Forest Service states that the reasonable implementation, application, and monitoring of BMP's in effect achieves compliance with the intent of the Clean Water Act and State water quality standards. (R10 Amendment 2509. 22-91-1)

B. DOI

1. Page 3-120: According to the Bureau of Mines' Minerals Availability System (MAS), there are 13 mineral locations within the Southeast Chichagof Project Area:

0021140104	Montana Bonanza	0021140213	Basket Bay
0021140012	Basket	0021140216	Basket-Kook
0021140194	Bicentennial	0021140061	Marble Cove
0021140212	Redone	0021140214	Tenakee Inlet
0021140206	Limestone Pit	0021140204	Silver Bay Qry
0021140205	Crab Bay Sand Barge	0021140204	Corner Bay
0021140100	Tenakee Inlet Marble		

FS RESPONSE: Comment noted and considered. The appropriate changes have been made in the EIS.

2. Page 4-166: The FS discusses here marine and estuarine systems, but does not describe or define these habitat types or how they were differentiated and measured to determine environmental impacts.

FS RESPONSE: See Table 4-101 and Appendix H, Dive Report. The habitat types vary from site to site. Measurements of the habitat are made in Appendix H Dive Report. (see Cowardin 1979, Classification of Wetlands and Deepwater Habitat of the United States). This describes the differentiation of estuarine and marine systems in the Southeast Chichagof Planning Record.

C. NMFS

1. Page 4-43: The numbers in Table 4-38 for VCU 232 under Alternative E appear to be reversed.

FS RESPONSE: Comment noted; the error has been corrected.

2. Threatened, Endangered, and Sensitive Species should be labeled Steller Sea Lions. Consultation regarding this marine mammal should be limited to the NMFS.

FS Response: Comment noted and appropriate changes are made.

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GEORGE B. JOHNSON
MAYOR
CITY COUNCIL
WALLY R. FRANK, SR.
EDWARD J. CAMBLE, SR.
PAULINE JIM
DANIEL JOHNSON, JR.
FRANK LANE
GEORGE NELSON

June 16, 1992

Mr. Gary Morrison
Chatham Forest Supervisor
204 Siginaka
Sitka, Alaska 99835

Dear Mr. Morrison:

The City of Angoon is responding to the SE Chichagof Draft EIS and ANILCA 810 hearings and is submitting the attached resolution and summary document entitled; Angoon's Response to SE Chichagof Draft EIS, dated June 16, 1992.

We are very concerned over the lack of consideration of Angoon's needs as represented in the alternatives of the draft, and we request that you prepare a supplement that will correct the omissions in the draft.

We look forward to your response to our concerns.

Sincerely,

George B. Johnson, Jr.
George B. Johnson, Jr.
Mayor

Enclosures

cc: file (2)



RESOLUTION NO. 92-05

WHEREAS, The residents of Angoon have strong cultural, subsistence and economic ties with SE Chichagof; and

WHEREAS, past and current logging on Admiralty, Baranof and Chichagof Islands have destroyed sacred cultural sites, limited our traditional subsistence activities, reduced our commercial fish catch and limited our economic options; and

WHEREAS, the Forest Service projects significant reduction in deer numbers, as a result of logging and increased competition for remaining deer; and

WHEREAS, continued logging and roading activities will continue to displace resource users from SE Chichagof, many of whom will utilize the Admiralty Island areas near Angoon; and

WHEREAS, the Forest Service's Draft Environmental Impact Statement (DEIS) on SE Chichagof portrays only viable alternatives that will further increase logging; and

WHEREAS, The DEIS does not portray an alternative representing Angoon's needs; and

WHEREAS, the Forest Service has continually tried to involve the residents of Angoon at the time these residents are busy fishing and subsisting; and

WHEREAS, the forest service has a trust responsibility to Angoon's tribal government; now

~~I-A~~
~~X-B~~
~~IV-A~~

THEREFORE BE IT RESOLVED: That the City of Angoon, coordinating with the Tribal Government, request that the Forest Service;

IV-E

1. Issue a DEIS Supplement that includes an alternative that represents the subsistence and economic needs of Angoon.
2. Involve the people of Angoon in the fall and winter when they are not fishing or subsisting.
3. Recognize their trust obligations to the Angoon Tribal Government and express that obligation in an alternative in the supplemental DEIS.

IV-A

BE IT FURTHER RESOLVED: That Angoon pursue all administrative and legal options to achieve the request to the Forest Service.

PASSED AND APPROVED by the City Council on June 16, 1992
by a vote of 5-0 Years, 0-0 Days, 0-0 Abstain, 2-0 Absent.

For the City of Angoon


Mayor



ATTEST: Julie A. Lane
City Clerk

TELEPHONE (907) 747-5048
TELEFAX (907) 747-5048



ALASKA PULP CORPORATION

4600 SAWMILL CREEK ROAD - SITKA, ALASKA 99835-9798

June 29, 1992

Gordon Anderson
Team Leader
USFS-Chatham Area
204 Siginaka Way
Sitka, Alaska 99835

RE: Southeast Chichagof Draft EIS

Alaska Pulp Corporation (APC) has reviewed all of the alternatives in the Southeast Chichagof Draft EIS and we cannot find any of them that are acceptable as presented.

According to the economic assessment displayed in the table 4-84 on page 4-113, alternative C is the most economical, but it only provides 115MMBF on 64 miles of road (23 miles of which is major reconstruction). The Forest Service preferred alternative (E) provides more volume (130MMBF) on 90 miles of road (14 of which is major reconstruction), but \$34/MBF more expensive.

APC would like to see an alternative that mixes units from the various Forest Service proposals to come up with around 130MMBF on less than 50 miles of new road (spec and spur combined) with minimal reconstruction of existing roads. Any new roads less than three miles long should be spur roads and pick up all the available volume rather than specified and only picking up less than 1/5 of the available volume. This would help the volume appraise out positive.

The helicopter volume at Corner Bay is approximately what APC proposed to the Forest Service in 1988 when the markets were much better than they are today. All of the available helicopter volume should be selected, but the Forest Service needs to wait for the market to improve before making an offering with helicopter volume in it.

It was explained to APC that the volume and logging characteristics used to produce the economic assessment in table 4-84 came from field exams of the different timber types and units in the various alternative. APC believes a better method would have been to use the data in the mid-market section of our July 1, 1990 contract that was developed from thousands of cruise plots (APC and Forest Service) on Baranof and Chichagof Islands plus years of scale data from the same area.

Gordon Anderson
June 29, 1992
Page 2

XII-B

The use of the July 1, 1990 mid-market data would have provided a better picture of how the units will actually appraise out than the data used by the Forest Service to develop table 4-84 data.

The mid-market analysis was developed as a guideline to give both the Forest Service and the purchaser a preliminary idea of how economical a proposal was before the actual appraisal was done. The "net stumpage value" as displayed in the table 4-84 data is not the return the Forest Service would expect at the mid-market period, but rather an estimate of the return when only 60% of the normal profit and risk is deducted from the pond log value along with the harvest cost deduction. In other words, at the "mid-market" period, the economic assessment would show \$37/MBF± less than the displayed in table 4-84 is all of the profit and risk were deducted from the pond log value.

The Draft EIS does state in the write-up under Economics, that "an allowance of 60% of normal profit and risk was included as a cost and subtracted from pond log value...", but the rest of the discussion ignores this fact and talks about the return to the Government as if the remaining 40% of profit and risk didn't exist.

If an appraisal were made on the preferred alternative today using the first quarter 1992 data and the Forest developed volumes and logging characteristics, then the alternative would be over \$40/MBF deficit. If an appraisal were made on the preferred alternative today using the first quarter 1992 data and the volumes and logging characteristics developed for the July 1, 1990 contract then alternative E would be over \$70/MBF deficit and would not appraise out even if the Forest Service built all of the proposed specified roads.

XII-A1

APC's pulp mill and sawmill have a combined annual volume requirement of over 280MMBF/year when the sawmill runs two shifts. Due to a lack of volume available from the Forest Service in the past year, APC has had to cut the sawmill back to one shift.

The high percentage of Alaska Yellow Cedar (AYC) in most of the alternatives is going to make APC's volume requirements ever harder to meet. The AYC is appraised by the Forest Service and counts towards the volume harvested, but it provides no sawlog volume to keep the sawmill in operation and cannot be used in APC's pulping process and therefore provides no volume for the pulp mill. On top of that, the price of AYC fluctuates rapidly from month to month and volume that might provide a positive return on an appraisal can very likely cause a negative return by the time it is harvested.

In order to keep APC's mills in operation, it is necessary to keep the AYC portion of the harvest to a minimum.

In terms of describing the contributions of the timber industry or Alaska Pulp Corporation

XII-A1

XII-B

Alaska Pulp Corporation

Gordon Anderson
June 29, 1992
Page 3

V-C1

to community stability, the economic analysis of the Southeast Chichagof Draft EIS is shallow and inadequate. The Draft EIS only speaks in general or vague terms and does not give specific information, even though specific information is available about the current impact of the timber industry or the loss of the timber industry.

The Forest Service, with each Draft EIS, also should look at the worse case scenario in terms of jobs and community stability. It should address the real possibility that this timber sale volume could be zero or that its volume will not meet the needs of the APC Long-Term timber contract and would cause short-term or long-term closures of mills in Sitka and Wrangell. Because of pending wood shortages in past years (which APC has no reason to believe are over), the company can no longer assume that federal timber will be made available in a timely manner and without disruption to the continuous flow of timber to the two mills.

If Alternative A is selected or the selected alternative is restricted through appeal and litigation, the reality of work disruptions are evident. We feel the U.S. Forest Service should prepare for this scenario. We know of no timber sales in the Post-Tongass Reform era that have not been appealed.

In 1988, APC hired a consultant in Juneau to look at the economic impacts of this company to Sitka and to Southeast Alaska. The pulp mill's 400 jobs directly and indirectly impacts 1532 other jobs in the region, including many timber-program related jobs in the federal government.

We think it would be entirely proper to list, along with the direct jobs, the indirect jobs that exist because of the timber industry. Alaska Pulp Corporation's stable workforce creates a higher than average (job) multiplier, 2.4 when compared to the Sitka average. This means that every job at Alaska Pulp Corporation represents 2.4 jobs in the community.

In 1990, the same Juneau economist tabulated the damages that the two long-term timber contract holders could seek if contractual obligations were not met. The cost was from \$700 million to \$1.1 billion - money that comes out of the federal treasury.

"The prospect of economic decline is not one that most citizens are desirous of contemplating in an established and historically stable community as is Sitka," wrote City Administrator, Stuart Denslow.

In a 1989-analysis, the City of Sitka determined the costs to the city budget and economy. City payroll would decline 28%, business sales - 28%, sales tax - 28%, population - 23%. The list of other costs and losses are tremendous. (We have included that entire list for you.) In addition to the costs the city cites, there would be tremendous losses in property values. There would be a glut of houses on the market and many people would lose

Gordon Anderson
June 29, 1992
Page 4

V-D1

much of the equity in their houses.

Social costs of unemployment, relocation and retraining are well documented as mills close throughout the Pacific Northwest and British Columbia. This includes costs for unemployment benefits, additional burdens for social programs and higher crime.

How does the U.S. Forest Service think that Sitka's \$18.4 million in payroll from APC (let alone the \$25 million spin-off payroll) can be replaced? What kind of economic recovery monies would be available? What are the costs? What about the direct loss to the local communities' budgets for roads and schools - money received because of timber receipts? What about the cumulative effect of those dollars that turn over several times before leaving the region?

The U. S. Forest Services' own information shows that the Tongass Timber program generates (to Southeast Alaska communities) about 15 times the dollars it spends to prepare timber sales. What will replace these dollars? How could this type of economic formula be applied to this EIS?

The U.S. Forest Service is charges with maintaining and protecting community stability. It is charged with upholding community customs and cultures that includes the lifestyles afforded from fishing and timber by all persons. We hope the timber programs will continue. There is more than Alaska Pulp Corporation at stake.

APC needs economic volume, i.e. volume that appraises out, from the Southeast Chichagof area in order to provide logs to keep the sawmill and pulp mill in operation. The only way APC will be able to obtain economic volume from the Southeast Chichagof area is for the Forest Service to provide better timber recover per mile of road constructed than any of the proposed alternatives displayed. The Forest Service needs to mix and match economics offering than any of those presented in the Draft EIS.

The Draft EIS treats economics as just another section of the document, but if the Forest Service doesn't have an economic offering then all of the other work done on the document is going to be moot. More emphasis on and more detail in developing an economic assessment and an economic alternative needs to be developed.

APC needs to have 65MM of sawmill quality logs per year to run the Wrangell mill. AYC cannot be used in the sawmill or the pulp mill, so AYC volume does nothing to keep APC's facilities in operation.

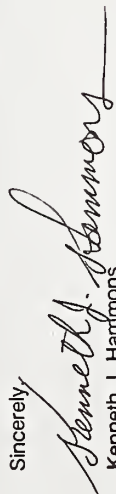
The majority of the volume on Southeast Chichagof is pulp quality and will end up in Sitka. The majority of any volume finally selected for APC to harvest will be sent to Sitka. In order to keep the pulp mill and sawmill supplied with volume, the Forest needs to

Gordon Anderson
June 29, 1992
Page 5

provide economic timber.

Thank you for the opportunity to comment on the Southeast Chichagof Draft EIS.

Sincerely,



Kenneth J. Hammons
Chief Logging Engineer

KJH:cs

cc: G. Woodbury/P. Joensuu
K. Korthals/A. Fisher
B. Brown
L. Blasing

Prepared for:

Alaska Pulp Corporation
Sitka, Alaska

Prepared by:

The McDowell Group
a division of
Data Decisions Group
Juneau • Seattle

March 1989

The Federal Treasury Impacts of the Southeast Alaska Pulp Mill-Related Labor Force

THE FEDERAL TREASURY IMPACTS OF THE SOUTHEAST ALASKA PULP MILL-RELATED LABOR FORCE

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Introduction

Alaska Pulp Corporation of Sitka, Alaska contracted with the McDowell Group, Alaskan management and economic consultants since 1972, to estimate the federal treasury impacts of the Southeast Alaska pulp mill-related labor force. Included among these impacts are federal income taxes paid, social security contributions (by both employer and employee), and where available federal unemployment taxes.

Counted among the pulp mill-related labor force were direct pulp mill workers in Sitka and Ketchikan, loggers directly employed by the two mills, and subcontract loggers involved in the harvest of APC or KPC timber. Also included were sawmill and logging employees of Wrangell Forest Products, whose Wrangell facility is owned by Alaska Pulp Corporation. Direct pulp mill, sawmill and logging employment in Sitka, Ketchikan, Wrangell and outlying areas totaled 1540 jobs in 1988. Subcontract logging employment added another 590 jobs.

Also counted among the pulp mill-related labor force were those jobs created in the support sector as a result of pulp mill spending and as a result of the demand for goods and services by mill employees. Support sector employment and payroll in Sitka, Ketchikan, Wrangell, and in Southeast Alaska overall was calculated using known standard employment multipliers and average annual support sector salaries where available, and estimates where no previous research had been performed. Employment multipliers ranged from 1.5 (for remote logging employment) to 2.36 (for pulp mill employment in Sitka and Ketchikan, where mill jobs account for the highest salaries among all basic industries, and therefore generate the greatest multiplier impact). In total, pulp mill-related operations in Southeast Alaska generated an estimated 1,900 support sector jobs in 1988, accounting for an estimated \$39 million in payroll.

Federal income tax withholding and social security tax payments (for both employer and employees) were provided by Alaska Pulp Corporation for both direct APC operations and Wrangell Forest products operations. Estimated federal withholding and social security tax payments were provided for Ketchikan Pulp Company operations. Federal income tax withholding averaged 17% of gross payroll and social security payments (employer and employee payments combined) averaged 14% of total gross payroll. These effective rates of taxation were applied to estimated subcontractor payroll and estimated support sector payroll to derive federal withholding and social security revenues from these pulp mill-related sectors.

Alaska Pulp Corporation

Summary of Findings

The operations of Alaska Pulp Corporation, Wrangell Forest Products and Ketchikan Pulp Company directly generated \$28 million in federal income taxes, social security taxes and federal unemployment taxes in 1988. This total includes federal revenues generated as a result of subcontracted logging employment and pulp mill-related logging employment by Native corporations involved in timber harvest in Southeast Alaska.

The operations of Alaska Pulp Corporation, Wrangell Forest Products and Ketchikan Pulp Company also indirectly accounted for \$12 million in federal income taxes and social security taxes in 1988 through related support sector employment and payroll.

In total, employment and payroll generated by Southeast Alaska's two pulp mills added over \$40 million to the federal treasury in 1988.

Total Annual Federal Revenues from Southeast Alaska Pulp Industry-Related Contributions to the Federal Treasury (Total of Federal Withholding, FICA, FUT*)

	Direct	Indirect	Total
Alaska Pulp Corporation	\$5,813,000	\$3,592,000	\$9,405,000
Ketchikan Pulp Company	9,952,000	3,940,000	13,892,000
Wrangell Forest Products	3,968,000	1,020,000	4,988,000
Subcontracted Logging & Pulp Mill-Related Native Logging	\$8,342,000	\$3,583,000	\$11,925,000
Grand Total	\$28,075,000	\$12,135,000	\$40,210,000

*Federal withholding is federal income tax, FICA is social security, and FUT is the federal unemployment tax.

Federal Revenues from the Alaska Pulp Corporation Labor Force

Direct Impacts on the Federal Treasury: Including Rowan Bay loggers

Total Payroll: \$18,671,000,
Federal Withholding: \$3,176,000
FICA: \$2,604,000 (total of employer and employee contributions)
FUT: \$33,000

Total Direct Federal Revenue: \$5,813,000

Indirect Impacts: Excluding Rowan Bay loggers

Assume Employment Multiplier of 2.36 (from 1988 Sitka EBS)
Total employment at APC in Sitka is 39% including 21 subcontracted longshore workers.

Total Indirect Employment: 396 x 1.36 = 539 support sector jobs in Sitka
Average Annual Support Sector Salary in Sitka: \$21,500
Total APC-Related Support Sector Payroll: 539 x \$21,500 = \$11,588,500

Assume same effective rates of withholding as shown above apply to the total support sector payroll:
17% withheld for federal income tax, 14% withheld for FICA (including both employer and employee contributions). No Federal Unemployment Taxes were estimated for indirect employment.

Federal Withholding: \$1,970,000
FICA: \$1,622,400 (total of employer and employee contributions)

Total Indirect Federal Revenue: \$3,592,400

Total APC-Related Additions to the Federal Treasury: \$9,405,000

Alaska Pulp Corporation

Federal Revenues from the Ketchikan Pulp Company Labor Force

Direct Impacts on the Federal Treasury:
Including all KPC loggers

Total Payroll: \$32,000,000

Federal Withholding:* \$5,440,000

FICA: \$4,480,000 (total of employer and employee contributions)

FUT: \$36,000

Total Direct Federal Revenue: \$9,952,000

Indirect Impacts:
Excluding KPC loggers

Assume Employment Multiplier of 2.36 (same multiplier as in Sitka)
Total employment at KPC in Ketchikan is 471 workers.

Total Indirect Employment: $471 \times 1.36 = 640$ support sector jobs in Ketchikan

Average Annual Support Sector Salary in Ketchikan: \$19,850

Total KPC-Related Support Sector Payroll: $640 \times \$19,850 = \$12,704,000$

Assume same effective rates of withholding as shown above apply to the total support sector payroll:
17% withheld for federal income tax, 14% withheld for FICA (including both employer and employee contributions). No Federal Unemployment Taxes were estimated for indirect employment.

Federal Withholding: \$2,160,000

FICA \$1,780,000 (total of employer and employee contributions)

Total Indirect Federal Revenue: \$3,940,000

Total KPC-Related Additions to the Federal Treasury: \$13,892,000

Federal Revenues from the Wrangell Forest Products Labor Force

Direct Impacts of the Federal Treasury:
Including WFP loggers

Total Payroll: \$12,847,000,

Federal Withholding: \$2,092,000

FICA: \$1,840,000 (total of employer and employee contributions)

FUT: \$36,000

Total Direct Federal Revenue: \$3,968,000

Indirect Impacts:
Excluding WFP loggers

Assume Employment Multiplier of 2.0
Total employment at WFP in Wrangell is 180

Total Indirect Employment: $180 \times 1.00 = 180$ support sector jobs in Wrangell

Average Annual Support Sector Salary in Wrangell: \$18,200

Total WFP-Related Support Sector Payroll: $180 \times \$18,200 = \$3,276,000$

Assume same effective rates of withholding as shown above apply to the total support sector payroll:
17% withheld for federal income tax, 14% withheld for FICA (including both employer and employee contributions). No Federal Unemployment Taxes were estimated for indirect employment.

Federal Withholding: \$560,000

FICA \$560,000 (total of employer and employee contributions)

Total Indirect Federal Revenue: \$1,020,000

Total WFP-Related Additions to the Federal Treasury: \$4,988,000

Federal Revenues From Subcontracted Loggers

The following analysis measures the employee-related impacts on the federal treasury resulting from timber harvesting employment by APC and KPC subcontractors. These estimates of subcontractor employment are based on industry averages of employment per volume of timber harvested (130 workers per 50 million board feet harvested). Also calculated here is an estimate of the employment impact of pulp mill log purchases of Native corporation logging employment and the related federal treasury impacts.

Alaska Pulp Corporation

1988 Harvest from APC Tongass Allotment: 110 mmbf (total of sawlogs and pulp logs)
Based on Industry Average of 130 jobs per 50 mmbf harvested, APC accounted for 285 logging jobs.
Direct APC Logging Employment (Rowan Bay): 65 jobs
Total Subcontractor Employment: 220 jobs

Ketchikan Pulp Corporation

Estimated 1988 Harvest from KPC Tongass Allotment: 190 mmbf (total of sawlogs and pulp logs)
Based on Industry Average of 130 jobs per 50 mmbf, KPC accounted for 490 logging jobs.
Direct KPC Logging Employment: 120 jobs
Total Subcontractor Employment: 370 jobs

Native Corporation Logging Employment Impacts

Estimated pulp mill purchases of Native harvested pulp logs: 80 mmbf (including both mills)
Based on 100 jobs per 50 mmbf (see note below) harvested, the two pulp mills indirectly accounted for 160 Native corporation logging jobs.

NOTE: Employment per harvest volume estimates used here are taken for a 1988 McDowell Group study *The Socio-Economic Impacts of Alaska Pulp Corporation*. The Native corporation impact is relatively less as a portion of the logging employment is insensitive to the level of pulp log utilization.

Summary of Pulp mill Generated Subcontract and Native Logging Employment

Direct Impacts

Estimated total subcontract and Native corporation logging impacts:	750 jobs
Average annual salary in the logging industry in Alaska:	\$35,880
(from Alaska Department of Labor Statistical Quarterlies, 1987 data)	
Estimated annual payroll of subcontracted and pulp mill generated Native logging employment:	\$26,910,000

Estimated Federal Withholding (17%):	\$4,575,000
Estimated FICA (14%):	\$3,767,000
Total Direct Federal Revenue:	\$8,342,000

Estimated Cost to Buy Out 50-Year Timber Contracts

Buying out the pulp mill's 50-year timber harvest contracts could very significantly impact the federal treasury. Two preliminary estimates regarding the cost of buying out these contracts have so far been made; one by the Congressional Research Service and another by the Washington, D.C. law firm of Saltman & Stevens.

These estimates are provided below:

Source: Congressional Research Service, American Law Division, Environment and Natural Resources Policy Division
Range: \$21.5 million to \$150 million

Source: Saltman & Stevens, Attorneys, Washington, D.C., (at the request of Alaska Pulp Corporation)
Range: \$700 million to \$1.1 billion

Indirect Impacts of Pulp Mill Related Logging Employment

Alaska Pulp Corporation logging employment:	65
APC Subcontract logging employment:	220
Wrangell Forest Products logging employment:	150
Ketchikan Pulp Company logging employment:	120
KPC Subcontract logging employment:	370
Pulp Mill-related Native Corp. employment:	160
Total Logging Employment:	1,085

Logging Related Support Sector Employment in Southeast Alaska
(Assuming employment multiplier of 1.5) 540 jobs

The average annual support sector wage in Southeast Alaska is \$21,400

Total logging related support sector payroll:	\$11,556,000
Estimated Federal Withholding (17%):	\$1,965,000
Estimated FICA (14%):	\$1,618,000
Total Indirect Federal Revenue:	\$3,583,000
Total Direct and Indirect Federal Revenues:	\$11,925,000

Alaska Pulp Corporation

Handwritten: "Can to new town APC"



City and Borough of Sitka

304 LAKE STREET, SITKA, ALASKA. 99835

April 11, 1989

TO: Greater Sitka Chamber of Commerce
Box 638
Sitka, AK 99835

FROM: Stuart O. Denslow

SUBJECT: ECONOMIC IMPACTS RESULTING FROM
CLOSURE OF ALASKA PULP COMPANY DOE
TO LACK OF TIMBER RESOURCES

The prospect of economic decline is not one that most citizens are desirous of contemplating in an established and historically stable community as is Sitka. However, with the present congressional legislative threat to continued access to Tongass timber resources, we must realistically evaluate the potential economic impacts should pending congressional proposals become law. Per your request of last week I have enclosed some 1987 data developed last year to estimate the potential loss to the Sitka economy which would occur were the Alaska Pulp Company to close operations. These preliminary estimates draw on data from the 1988 Sitka Economic Base Study prepared by The McDowell Group. An updated and revised 1989 version of the base study, by the same firm, will be available early next month. The final numbers will change since APC's relative importance to Sitka's economy has increased slightly and any changes are likely to increase the impacts of closure. This is due to the fact APC employment and payroll have risen since the 1988 report.

Estimates in the attached table include population (-23%), employment (-23%), payroll (-28%), average wage of remaining employment (-7%), total business sales (-28%), and municipal impacts of electrical revenues (-27%), water revenues (-24%) and sales tax (-28%).

Reader's Note: U.S. Forest Service employment in Sitka was an estimated 166 full-time equivalent jobs during 1988, amounting to \$5 million in payroll. Closure of the APC pulp mill would significantly impact Forest Service employment in Sitka and throughout Southeast Alaska. Combined, Alaska Pulp Corporation and the Forest Service play the following socioeconomic role in Sitka:

	Sitka with APC and USES	APC and USES Impacts	Sitka without APC and USES	Percent Change
Population	8,280	2,745	5,535	-33.1%
Employment	3,938	1,205	2,633	-33.1%
Direct		557	3,381	-14.1%
Indirect		748		
Payroll (million \$)	\$93.7	\$35.4	\$58.3	-37.8%
Direct		\$19.4	\$74.3	-20.7%
Indirect		\$16.0		

The Greater Sitka Chamber of Commerce strongly supports the timber industry as well as other major industries such as fishing, tourism and mining in Southeast Alaska. We are working toward continued economic growth and stability in Sitka.

Greater Sitka Chamber of Commerce

Russell W. Brown

Helen M. Drury

Russ Brown
Cube Cove #aa
Juneau, A.K.

May 4, 1992

Dear sir:

I wish to go on record in favor of alternative E for further logging on Chichagof Island. It will provide much needed jobs & revenue and the proposal allows ample area to be set aside for old growth protection. From looking at the Forest Service map provided showing proposed road construction & logging units it is apparent the F.S. is taking care to protect riparian areas and salmon streams, which is important. I would hate to see the salmon run compromised in S.E.

I feel it is important for the F.S. to manage the forest in South East & that policy needs to contain provision for sustained yield. If the forest is left untouched in my opinion that is a waste of a renewable natural resource.

Sincerely
Russell W Brown

1011 Industrial Park Rd
Sitka, AK 99835-7113
29 June, 1992

Shirley Anderson
S.E. Chichagof Planning Team
204 Sigurdson Way
Sitka, AK 99835

Dear Mr. Anderson:

I am writing because of my concern regarding your SE Chichagof Forest EIS. I have a number of reservations but would like to share them with you to a lack of time.

The Forest Service, timbering for timber, is in force again now, poor and makes me wonder if you are involved. Concerned with what the public thinks, loggers, members of the public who can provide scientific and analytical thinking at this proposal.

Order problems; 1. Timber harvest only, very limited input by fish, hydrology, wildlife and fishing efforts. Timber input is practically zero while it is one of Alaska's most important industries. Sometimes the unit card entries for certain specialties were not made by specialists of the correct discipline!

2. Most with full reviews were done by timber and engineering specialists holding your continuing bias for timber, and "letting out the cat". The law states that there should be full consultation and cooperation between all disciplines.

3. "Openings" in the forest should be considered alternatives for 300-400 years.

4. Little impact on birds and other wildlife are only superficially dealt with.

My recommendation is for "No action" in light of this very inadequate statement.

Very sincerely
Shirley M. Drury

United States
Environmental Protection
Agency

Region 10
1200 Sixth Avenue
Seattle WA 98101

Alaska
Idaho
Oregon
Washington



JUN 16 1992

REPLY TO
ATTN OF:

WD-126

Gordon Anderson, Team Leader
USDA, Forest Service
Chatham Area
204 Signaka Way
Sitka, Alaska 99835

Dear Mr. Anderson:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA) and § 309 of the Clean Air Act, we have reviewed the Draft Environmental Impact Statement (draft EIS) for the Alaska Pulp Corporation Long-Term Timber Sale Contract, Southeast Chichagof. The EIS analyzes seven alternatives for making timber volume available to the Alaska Pulp Corporation long-term timber sale contract in the Southeast end of Chichagof Island.

Based on our review, we have rated the draft EIS EC-2 (Environmental Concerns - Insufficient Information). This rating and a summary of our comments will be published in the *Federal Register*.

Our primary concerns are for the sale's impact on water quality. We are concerned that assuring that best management practices are implemented may not ensure that the Alaska Water Quality Standards (WQS) are being met. Water quality monitoring is required to ensure compliance with WQS. WQS may be exceeded as a result of the proposed sale. Additional information is needed on effectiveness monitoring from the water quality effects of timber harvest and road construction. The enclosure provide additional comments and details.

Thank you for the opportunity to review this draft EIS. Please contact Wayne Elson at (206) 553-1463 if you have any questions about our comments.

Sincerely,

Ronald A. Lee
Ronald A. Lee, Chief
Environmental Evaluation Branch

Enclosure

cc: Jim Ferguson, ADEC
Duane Peterson, NMFS
ADFG

Detailed Comments for
Alaska Pulp Corporation Long-Term Timber Sale Contract
Southeast Chichagof
Draft Environmental Impact Statement

Monitoring

Water quality and fisheries effectiveness monitoring is not included in the draft EIS. Information on implementation monitoring is included. The lack of an effectiveness monitoring plan in the draft EIS precludes reviewers from influencing its scope and extent. Monitoring is particularly important for a project of this magnitude, because it provides a check on the predictions of effects for the action alternatives. It is important to evaluate the effectiveness of planned mitigation measures to protect potentially affected resources.

This monitoring plan should include types of surveys, location and frequency of sampling, parameters to be monitored, indicator species, budget, procedures for using data or results in plan implementation, and availability of results to interested and affected groups. A helpful document has recently been completed for developing water quality monitoring plans: *Monitoring Guidelines to Evaluate Effects of Forestry Activities on Streams in the Pacific Northwest and Alaska*, EPA/910/9-91-001, May 1991.

The final EIS needs to include a feedback mechanism which relies upon monitoring so that standards and guidelines, best management practices, standard operation procedures, intensity of monitoring, and timber sale administration is adjusted when effectiveness monitoring indicates a need. Providing such a process for adjustment will ensure that mitigation measures will improve in the future and that unforeseen effects are recognized and minimized.

Water Quality Standards

A discussion is provided on Alaska Water Quality Standards (WQS) in the Affected Environment Chapter of the draft EIS. Timber harvest and road construction will affect water quality. From reviewing the Environmental Consequences Chapter we are unable to determine how the action alternatives will be consistent with the sediment standard. We recommend that an analytic approach be used to demonstrate compliance with the standard. (The R-1/R-4 sediment model has been used for granitic areas, for example, and could for the framework for cumulative effect models in SE Alaska.) We agree that implementation of Best Management Practices (BMPs) and buffer strip requirements will reduce sediment effects. However, the responsibility is on the Forest Service to demonstrate in advance that timber harvest and road construction will not cause beneficial use impairment and cause standards exceedances.

The following statement is found on page 4-61 of the draft EIS:

"Although numerical turbidity standards are included in the Alaska State water quality regulations, turbidity measurements are difficult to routinely apply to the regulation of nonpoint source sediment which results from timber harvest activities. Therefore, the EPA has determined that the reasonable implementation, application, and monitoring of BMPs achieves compliance with the intent of the Clean Water Act (Forest Service 1991)."

This statement could be misinterpreted and should be rephrased. EPA has said that the achievement of WQS for nonpoint source (NPS) activities occurs through the implementation of BMPs. BMPs are to be designed to achieve WQS, which would include applicable water quality criteria (WQS consist of both designated beneficial uses and the criteria necessary to protect the uses, and an antidegradation policy). In other words, the water quality criteria are the measures by which BMPs are judged to achieve WQ protection. In addition, the antidegradation policy explicitly lays out that existing beneficial uses must be fully protected.

Also, BMP implementation does not equal standard compliance. The key issue however, as previously stated, is that currently effectiveness monitoring has not been developed on the Tongass National Forest, Chatham Area, so assurances of compliance with WQS is not meaningful with a fundamental link missing. BMPs must be believed to protect water quality, and must be monitored to determine that this is the case. If they are not protective, then the BMPs must be revised.

Antidegradation

EPA believes that the proposed project could exceed WQS so that the fisheries beneficial use will not be fully maintained - therefore violating the federal antidegradation policy. An Antidegradation analysis, as specified in the Antidegradation Policy [40 CFR 131.12] should be included in the final EIS. This policy was developed to achieve the goals of the Clean Water Act (CWA), which are to restore and maintain the chemical, physical and biological integrity of the nation's waters and spirit and intent of the CWA.

The Antidegradation Policy describes three tiers of protection. Briefly:

Tier 1:

No activity is allowable which would partially or completely eliminate any existing beneficial use of a waterbody, whether or not that use is designated in a state's water quality standards. If an activity will cause partial or complete elimination of a beneficial use, it must be avoided or adequate mitigation/preventive measures must be taken to ensure that the existing uses and the water quality to protect those uses will be fully maintained.

Tier 2:

Where the quality of the waters exceed "fishable/swimmable" levels ("high quality waters"), that quality shall be maintained and protected unless the following are completed:

- 1) a finding that such degradation is necessary to accommodate important economic or social development in the area in which the waters are located.
- 2) full satisfaction of all intergovernmental coordination and public participation provisions, and
- 3) assurance that the highest statutory and regulatory requirements and best management practices for pollutant controls are achieved.

Please note that this provision is intended to provide relief only in extraordinary circumstances where the economic and social need for the activity clearly outweighs the benefit of maintaining water quality above that required for "fishable/swimmable" water. The burden of demonstration on the party proposing such activity is very high. In any case, the activity shall not preclude the maintenance of a "fishable/swimmable" level of water quality protection.

Tier 3:

Where "high quality waters" constitute outstanding national resources, that water shall be maintained and protected. As with the other tiers, the state determines the "tier" of the waterbody. If necessary, EPA will provide guidance on determining water quality status.

Federal Consistency Provisions of § 319 of the Clean Water Act

XIII-A

§ 319 includes water quality assessments and a NPS management program. The assessment identifies water that cannot reasonably be expected to attain or maintain applicable water quality standards or goals without control of nonpoint sources.

The Federal consistency provisions of § 319 represent an opportunity for State and Federal agencies to more closely coordinate their activities and cooperate in achieving water quality goals. If the State determines that a Federal application or project is not consistent with the provisions of its NPS program, the Federal agency must make efforts to accommodate the State's concerns. Executive Order 12372 provides guidelines for using the State intergovernmental review process for conducting § 319 Federal consistency reviews.

The final EIS needs to fully integrate § 319. Existing water quality conditions in NIEPA documents need to reflect and reference the state's water quality assessment. Direct or indirect nonpoint source water quality effects need to be reduced through

4

design and through mitigation measures to insure that the project is consistent with the state's NPS program. The contact for the Alaska Department of Conservation is:

Drew Grant
Nonpoint Source Coordinator
Alaska Department of Environmental Conservation
P.O. Box O
Juneau, Alaska 99811
Phone: (907) 465-2653

Page Specific Comments

1-11 We note that Land Use Designation (LUD) III places more emphasis on biological values than LUD IV. Value comparison units (VCU) 236 (Corner Bay) is designated LUD IV and 239 (Kook Lake) is designated LUD III. However, in Chapter 2, alternatives C, D, E, and F include more acres of logging on VCU 239 than VCU 236 (alternative C is double). Also, high hazard soils will be harvested in VCU 239 while in VCU 236 they will not (Table 4-48). This apparent contradiction should be explained. How are LUDs implemented in practice?

2-4 Clearcutting is referred to as the "optimum silvicultural system" in the project area. The final EIS should address this policy in the context of the recently issued Forest Service clearcutting policy.

2-11 Alternatives C, D, E, and F include helicopter logging for VCUs 236 and 239 with the use of the Corner Bay Log Transfer Facility (LTF). Is use of the Corner Bay LTF essential given that helicopters could release logs directly into Corner Bay?

2-34 The relative risk rating of sediment delivery potential from harvest units (Table 2-27) for Alternative E is the second highest of the five action alternatives. This seems inconsistent with the theme to "reduce the effect of the proposed activities on water, fisheries . . ." (page 2-15) for this alternative. This is reflected in the comparison of environmental consequences of alternatives as well, Table 2-46, page 2-44. Please explain.

2-46 With regard to implementation monitoring, what are the recourses of timber sale administrators and road inspectors if prescriptions are not implemented correctly?

2-46 What is compelling the Forest Service to complete implementation of effectiveness monitoring by December 1992?

5

IX-A2

2-47

In connection with validation monitoring, are there models being used to support environmental effects assumptions used in this draft EIS? If so, validation monitoring for them should be discussed.

2-47

It is often not stated in the implementation monitoring section when the monitoring of an activity is to occur (before, during or after). An example is the Timber Sale Layout. Where possible, this should be included.

IX-A3

2-47

The "responsible staff" lists several different individuals among many of the monitoring activities. This could make recovering the results of implementation monitoring very difficult. We suggest that there be a monitoring leader for the project or the Chatham Area. This is the same concept as the interdisciplinary team leader for preparation of the EIS.

IX-A2

2-47

The measurement of implementation monitoring often includes a 20 percent sample (example: Timber Unit Layout). How was this percentage arrived at? Was it based on the agency's experience base with implementation monitoring, for example? Is the 20 percent sample random or periodic?

XIV-A1

4-54

The draft EIS uses acres of high hazard soil as the basis for comparing risk of sediment delivery potential of alternatives. It is not clear whether this evaluation system is based on field verification or not. This should be explained.

VI-A1

4-167

Table 4-101 expresses the effects of log transfer facilities to acres of estuary and marine impact. This is not useful in disclosing environmental effects since the quality of the habitat would vary considerably from site to site. If estuary and marine habitat quality data are not available, then a qualitative discussion of habitat affected would be more meaningful.

False Island Kook Lake Council

IC Box 100
 Fairbanks, Alaska 99701
 June 24, 1992

Mr. Gordon Anderson
 USDA Forest Service
 Southeast Chichagof Project Planning Team
 204 Saginaka Way
 Sitka, Alaska 99835

Dear Mr. Anderson:

Please enter the following comments on the Southeast Chichagof Draft EIS in the record.

MA The False Island Kook Lake Council wishes to object to the scheduling of the release of the DEIS and the subsistence hearings. The timing corresponds to Commercial fishing openings, the upswing of the tourism industry and of summer subsistence activities, in short they have been scheduled to be available to residents at a time of year when we are least able to spend the time needed to address the issues. As the Forest Service has done this many times in the past and has received complaints on it, our organization feels that it must have been timed deliberately.

The Forest Service is required by ANILCA and NEPA to give subsistence uses priority and to study a wide range of alternatives. All of the proposed alternatives, except A, propose high volume cutting of over 100,000mbf.

None of the Alternatives, except A, are acceptable to FIKLC and we have had enough experience with the USFS to realize that you are not seriously considering a No Action Alternative. Therefore we request that you produce a supplemental DEIS that takes into consideration the following:

- MA** 1. A wide range of volume cuts- and seriously study low and no volume alternatives.
- XA-A** 2. Choose an alternative that respects subsistence and protects the forest for subsistence users.
- V-B** 3. Study the impact that logging and clear cutting have on the tourism industry and choose an alternative that does not negatively impact this important and nonconsumptive industry.
- V-A** 4. ~~add~~ that logging has negative impacts on commercial and sports fishing and sports hunting and choose an alternative that will not affect these locally important industries.
- X-B** 5. Include in the preferred alternative the closing of logging roads to recreational vehicles during logging operations and permanently retiring the roads after logging.
- VMI** 6. A study of the impact on our community of noise reduction, air traffic, log rafts and loose, unsalvaged logs.
- V-A** 7. Allow the public to study and comment on the plan in the late winter, January, February and March, when we have the time to do it properly.
- V-E** 8. Recommend cancellation of the fifty year contracts with the mills, thus cutting the demand for high volume timber harvest that gives the USFS it's reasons to disregard all the other important uses of the forest.

Sincerely,
Diane M. Ziel
 Diane M. Ziel/ FIKLC CONTACT

LAW OFFICES
GROSS & BURKE
A PROFESSIONAL CORPORATION
424 NORTH FRANKLIN STREET
JUNEAU, ALASKA 99801

(907) 586-2777

AVRUM M. GROSS
SUSAN A. BURKE

May 15, 1992

Mr. Michael A. Barton
Southeast Chichagof Project Planning Team
USDA Forest Service - Chatham Area
204 Siginaka Way
Sitka, AK. 99835

Re: Alternative E

Dear Mr. Barton:

I am part-owner of the old Chatham Cannery located in Sitkoh Bay in the Southeast Chichagof planning area. I have recently received the Draft EIS and I wanted to tell you that of the various alternatives presented I find Alternative E, that favored by the Forest Service, to be a reasonable one. As you probably know, I am not a big supporter of large scale logging in the Sitkoh Bay area, but faced with numerous competing pressures, the Forest Service has obviously made a real effort to achieve some balance with this proposed plan.

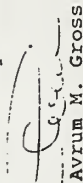
I have one suggestion that I would appreciate your considering. At present, there are four uncut DEIS units in Area 242 just north of Sitkoh Bay. In frankness, I hate to see those areas actually cut because the activity will have significant impacts on the use of the Bay and on the wildlife, particularly deer that live around the bay.

1-22

However, if these areas must be cut, could I suggest that after the logs are removed from the cutting areas that the road that runs along the northshore of the bay be closed from the point at the head of the bay where the road turns southwest to False Island. There is going to be a large number of people living at False Island for the next few years and those people are going to have an enormous impact on the fish and game resources of the Sitkoh Bay area if road access is permitted from False Island all the way to Sitkoh Bay and then north up Chatham Straits. The thought of trucks and four wheelers racing up and down the bay all season is not an appealing one. The road has been blocked from False Island for years by slides; it has only been cleared recently to allow logging in the new areas. Once the timber is removed from the four areas to be cut north of Sitkoh Bay, however, it will go a long way toward preserving the Sitkoh Bay area if you could take some action to ensure that activity generated by False Island is limited to logging. Many of the logging roads around Sitkoh Bay have been blocked after use; blocking this road would make a major difference in preserving subsistence and recreational uses in the Bay for many years in the future.

I appreciate the opportunity to comment on the Forest Service proposal.

Yours very truly,


Avrum M. Gross

1E

VI-A2

Paul Hamby

Russell Heath

MAY 4, 1992

TO: SOUTHEAST CHICAGO OF PROJECT PLANNING TEAM
USDA FOREST SERVICE - CHATHAM AREA
204 SIGINAKA WAY
SIKA, AK 99835-

DEAR SIR:

After reviewing the several alternatives, I have concluded that Alternative "E" seems to be the best choice. The socioeconomic benefits, combined with a minimal negative impact on fish streams, makes the "E" alternative favorable. Also, the road system employed, would open some very nice areas to recreational use. The road already in by Trap Mountain has really improved the availability of its rock structures for sport climbing.

The fact that "E" takes it easy on the estuary fainges is an example of good, sound planning.

Thank-you for the chance to express my opinion.

Paul J

- Paul Hamby
CUBE CODE #99
Juneau, AK. 99850-0360

London Burlington

Leave Kachikan alone!
When there are roads
and people all wildlife
suffers

Kachikan is home to
too much wildlife
I disturb it

Russell Heath

Audrey Hitch

TO: SOUTHERN CHICHAGOF PROJECT PLANNING TEAM

THANK YOU FOR SENDING ME THE DEIS FOR THE SOUTHEAST CHICHAGOF PROJECT AREA. I APPRECIATE THE OPPORTUNITY TO REVIEW THE INFORMATION AND RESPOND TO IT.

IDEALLY, I WOULD LIKE THERE TO BE NO MORE DISTURBANCE TO THIS AREA THAN THERE CURRENTLY HAS BEEN (ALTERNATIVE A2). THIS IS SUCH A MAGNIFICENT AREA... TO SEE ^{MORE} PATCHES OF CLEARCUT FOREST WOULD FURTHER HARM THE SCENIC QUALITY OF THE ISLAND, WHILE ALSO HARMING THE FISH HABITATS (REDUCTION IN SILT ERODING FROM CLEARCUTS AND LOGGING ROADS), WILDLIFE HABITATS, RECREATION AREAS, ETC.

SELECTIVE HARVESTING OF THE TIMBER

H-C

V-B

WOULD BE MY SECOND CHOICE, THIS WOULD DO MORE TO PROTECT THE ENVIRONMENT AND MAINTAIN THE ISLAND MORE "AS IS" THAN CLEARCUTTING.

MY THIRD CHOICE WOULD BE ALTERNATIVE C. I LIKE THE FACT THAT IT RESULTS IN AN AVERAGE OF 4.5 MMBF/MILE OF NEW ROAD CONSTRUCTION, THEREFORE LESS NEW ROAD CONSTRUCTION AND LESS DESTRUCTION OF WILDLIFE & FISH HABITATS THROUGH ROAD CONSTRUCTION IT ALSO PROVIDES THE LARGEST RETURN TO THE U.S. TREASURY.

AGAIN, THANKS FOR THE OPPORTUNITY TO EXPRESS MY OPINIONS.

PLEASE LET ME KNOW WHAT

THE OUTCOME IS.

SINCERELY,

Audrey Hitch
263 GERENHUA CT.
BALLWIN, MO 63011

(314) 344-5257



United States Department of the Interior

OFFICE OF THE SECRETARY

Office of Environmental Affairs
1689 C Street, Room 119
Anchorage, Alaska 99501-5126

ER92/0374

Michael A. Barton, Regional Forester
USDA Forest Service, Alaska Region
P.O. Box 21628
Juneau, Alaska 99802-1628

JUN 12 1992

Dear Mr. Barton:

In response to your April 3, 1992 request, we have reviewed the Draft Environmental Impact Statement (DEIS) for Southeast Chichagof Project Area, Alaska Pulp Corporation long-term Timber Sale Contract, Tongass National Forest, and offer the following comments for your consideration.

GENERAL COMMENTS

Cumulative Impacts: We do not believe that the DEIS adequately addresses the cumulative effects of the proposed south Chichagof logging activities in conjunction with other proposed timber sales on Baranof and Chichagof Islands. These combined actions will result in cumulative effects on local fish and wildlife populations, as well as on sport and subsistence harvest of those resources. These cumulative impacts need to be thoroughly addressed in the Environmental Impact Statement (EIS).

Although the DEIS does describe these concerns for the immediate southeast Chichagof project area, the document does not address long-term impacts resulting from timber harvest outside the project boundaries. We recommend that the revised EIS include a discussion of the effects on fish and wildlife and the sport and subsistence use of those resources, as well as a discussion of the cumulative impacts of past and proposed sales. This cumulative impact analysis should describe the effects on the above resources throughout the duration of the Alaska Pulp Corporation's contract period, and include the geographic area encompassing the communities of Sitka, Angoon, Tenakee Springs, and Hoonah.

Endangered Species: The DEIS lists several threatened and endangered species for which the Fish and Wildlife Service has responsibility under the Endangered Species Act, including the endangered American peregrine falcon, Aleutian Canada goose, and Eskimo curlew. The status of each of these species should be discussed. The threatened Arctic peregrine falcon (*Falco peregrinus tundrius*) is also likely to occur in the area and should be added to the Forest Service list.

It is most likely that the two peregrine subspecies, the Aleutian Canada goose, and the Eskimo curlew occur in the project area only to the extent that they would be classified as seasonal migrants. In light of their seasonal presence, the Fish and Wildlife Service does not expect these species to be adversely affected by the proposed action.

Log Transfer Facility Sites: We believe that reasonable consideration has been given to marine fishery resource values in siting and selection of the proposed alternative log transfer facility sites within the project area. Except for the proposed reactivation of the Crab Bay Log Transfer Facility site, the alternative Log Transfer Facility sites have avoided estuarine protected high value estuarine areas and meet the Alaska Timber Task Force

Guidelines' for siting Log Transfer Facilities. We believe that the DEIS underestimates the general adverse effect on marine and estuarine habitats and does not adequately display or discuss the direct and cumulative adverse effects due to construction or operation of the Log Transfer Facilities in bays, estuaries, and nearshore waters of southeast Alaska. Faris and Vaughn (1985) reported that as of 1985, there were 90 existing Log Transfer Facility sites, 49 log storage sites, and 228 alternative Log Transfer Facility sites in southeast Alaska.

Mitigation: The DEIS has no specific mitigation plan to avoid and minimize adverse effects on marine and estuarine areas directly impacted by the proposed development. The mitigation plan should include best management practices to reduce the adverse effects of bark deposits and specific measures to mitigate for any unavoidable habitat losses resulting from construction and operation of the Log Transfer Facility, and log storage sites. For example, the design of the Log Transfer Facility (e.g., a barge or crane let-down log transfer operation) can control log bundle entry speed and reduce discharge of bark and woodwaste into the marine environment.

The DEIS states that Log Transfer Facilities would not be restored or rehabilitated after completion of the proposed timber sale. This represents a significant change in past management policy and will result in permanent loss of upland wildlife habitats and adjacent marine habitat values. Accepted best-management practices involving other extractive industries, such as mining and oil development, require land managers and developers to restore disturbed sites once a project has been completed. Although future unplanned salvage sales may necessitate reactivation of some Log Transfer Facility sites, the responsibility to restore and rehabilitate disturbed areas should not be neglected as an important mitigation measure.

Species Diversity: We believe the use of the concept of species diversity throughout the DEIS to evaluate and compare habitat values at alternative Log Transfer Facility sites is not appropriate and is misleading to the public and agency reviewers. For example, the number of species observed at a site is not necessarily a good or valid indicator of the habitat value or "productivity" of a site. Ecological evaluations generally use the concept of "diversity index," which includes both number of species and the number of individuals to assess relative habitat values. Some highly productive shallow water areas have relatively low numbers of species.

Of even greater concern is the fact that data used to determine the "species diversity" of the sites was not determined by a uniform methodology. The list of species observed in the Forest Service-National Marine Fisheries Service general field reports is not appropriate for biological or statistical comparison between sites.

Specific studies and sampling procedures would have to be implemented to address species diversity before the concept could be used to evaluate alternatives and compare their impacts. We recommend that references to species diversity and alternative comparisons be deleted from the DEIS.

Affected Environment (Marine): The EIS should describe the specific area and habitats that would be affected at each of the proposed Log Transfer Facility sites in the Affected Environment section of the EIS.

Alaska Timber Task Force Subcommittee. 1985. LTF Siting, Construction, Operation, and Monitoring/Reporting Guidelines. 19 pp.

Department of the Interior

VI-B3

Environmental Consequences (Marine): The DEIS addresses only the areas which would be covered by construction fill materials and the specific areas of subtidal bark deposition. Although this limited approach may be satisfactory for some upland and terrestrial habitat assessments of direct impact, it is inadequate for assessing impacts to marine and freshwater systems where the water disperses impacts over a much broader area than the actual site of discharge.

The siting of an industrial facility that will result in the discharges of significant amounts of woodwaste and other non-point source pollutants, such as chronic petroleum product spills, construction and operationally induced turbidity and siltation, and organic leachates from upland and submerged woodwastes into estuarine embayments, can and will adversely impact water quality and associated fish and wildlife habitat values. Operational activities at logging camps and Log Transfer Facility sites will cause some species of migratory birds and other wildlife to avoid these high value areas. Turbidity and other pollutants can adversely affect salmon fry which rear and migrate through these nearshore areas. Other planktonic, demersal, and benthic marine organisms can also be adversely affected. Productive aquatic kelp and eelgrass beds would be degraded or eliminated in the vicinity of an Log Transfer Facility.

SPECIFIC COMMENTS

VI-B2

DEIS Summary, page 12, paragraph 5: The DEIS states that the False Island Log Transfer Facility site is active. However, on page 109, Chapter 3, the DEIS states that the same site has been inactive for 13 years. This discrepancy should be resolved.

VI-B1

DEIS Summary, page 12, Table S-6: The Corner Bay Log Transfer Facility site should be identified as estuarine rather than marine, since it is located at the mouth of a stream.

VI-C

Chapter 3, page 59, paragraph 8: The DEIS lists the marbled murrelet. The status of the marbled murrelet is currently under review by the Fish and Wildlife Service. Other species which are the subject of status reviews and occur in the project area include the Queen Charlotte goshawk (*Accipiter gentilis laingi*), and the harlequin duck (*Histrionacus histrionicus*). The marbled murrelet and Queen Charlotte goshawk are found in the project area's old growth forest habitat, which may provide one or more critical elements of their life requirements. Harlequin ducks nest adjacent to inland rivers and streams, and commonly use nearshore waters throughout the year. The effect of the proposed actions on harlequin ducks would depend on the nature and time of construction and operation activities. It is likely that major perturbation of riparian habitats, particularly during the nesting season, would negatively affect harlequin ducks in the project area. In light of Fish and Wildlife Service's ongoing studies of goshawk and harlequin duck populations, we suggest that these species be added to the EIS list of species of concern.

VI-C

The DEIS does not address the plant species currently being investigated in fish and wildlife status studies and reviews, although there is limited information available concerning abundance and distribution of many southeast plant species. The Fish and Wildlife Service will be reviewing the status of several plant species thought to be in the project area, including *Aster yukonensis*, *Calamagrostis crossigolensis*, *Carex lenticularis* var. *dollis*, and *Montia bogotensis*. We believe these and other plant species of concern should be identified and discussed.

VI-B2

Chapter 3, page 109, paragraph 1: The DEIS states that the False Island Log Transfer Facility is to be reconstructed as a low-angle slide facility. To our knowledge, the Forest Service has not received authorization required

under provisions of Section 404 of the Clean Water Act to construct the slide facility as proposed. The Fish and Wildlife Service, National Marine Fisheries Service, Environmental Protection Agency, and the Alaska Department of Fish and Game are on record as requesting denial of the project as proposed. The resource agencies recommended in May 1990 that the Corps of Engineers deny the Section 404 permit for the proposed Log Transfer Facility in Peril Strait 14, 1-660003. At this time, the matter has not been resolved and the permit has not been issued.

Chapter 3, page 120, Mining Claims: According to the Bureau of Mines' Minerals Availability System (MAS), there are 13 mineral locations within the Chichagof project area. Following is a list of the deposits:

0021140104	Montana Bonanza	0021140213	Basket Bay
0021140012	Basket	0021140216	Basket-Kook
0021140194	Bicentennial	0021140061	Marble Cove
0021140212	Redone	0021140214	Tenakee Inlet
0021140206	Limestone Pit	0021140204	Silver Bay Quarry
0021140205	Crab Bay Sand Barge	0021140223	Corner Bay
0021140100	Tenakee Inlet Marble		

Chapter 4, page 170, paragraph 9 and page 171, paragraph 2: The DEIS states that the area of bark coverage would not be expected to increase beyond current boundaries if reactivated. We believe this statement is unsupported. The transfer of additional timber volumes will probably increase the extent of subtidal area impacts by bark debris. Although the size of bark deposits can be highly variable and site specific, Freese¹ reported that the area and volume of bark deposits at Log Transfer Facilities were correlated with the amount of timber transferred at the Log Transfer Facility. We suggest statements in the DEIS which contradict these research findings be explained or corrected.

VI-A3

Chapter 3, page 171, paragraph 1: The DEIS states that the length of time that bark debris remains in place is unknown. Although the maximum length of time may be unknown or undocumented, subtidal surveys have shown that bark deposits can remain in place for decades (Conlan, 1979).

VI-A4

Chapter 4, page 166, paragraph 4: The DEIS states that where site specific information is not available, direct impacts at Log Transfer Facilities would be estimated to be less than the average 1.96 acres reported in a previous regional study. Unless site specific information is considered, we recommend the average area of impact reported in the literature (i.e., 2.4 acres as reported by Freese (1987) or 1.96 acres reported by Faris and Vaughn²) should be used in FS calculations. If the 1.96-acre figure is used, we recommend that it be rounded to 2.0 acres, since underwater area measurements to the nearest 1/100-acre indicate levels of precision that were not achievable in the referenced studies.

XIV-B2

Chapter 4, page 166, paragraph 5: The DEIS discusses marine and estuarine systems. However, the DEIS does not describe or define these habitat types or how they were differentiated and measured to determine the environmental consequences of the proposed actions. This needs to be explained in this section.

¹Freese, J.L. 1987. Factors affecting benthic deposition of bark debris at 13 log transfer facilities in southeastern Alaska, NMFS, Juneau, AK.

²Conlan and Ellis. 1979. Effects of Woodwaste on Sandbed Benthos. Marine Pollution Bulletin. 262-267 pp.

³Faris, T. and K. Vaughn. 1985. Log transfer and storage facilities in southeast Alaska, Tech. report PNW-174, USDA, Portland, OR. 24 pp.

VM-A5

Table 4-101: The table indicates that no species count is on record for the Corner Bay site. Corner Bay is one of the most studied Log Transfer Facility sites in southeast Alaska. There are several reports and publications available from which to obtain species lists.

The table does not indicate how the number of acres of marine and estuarine habitat at each site was determined and quantified. Although there are several different identifiable marine habitat types at each Log Transfer Facility site, we are unaware of any classification system that would differentiate between marine and estuarine habitats in the relatively small contiguous areas (e.g. less than two acres) evaluated at the Log Transfer Facilities. We suggest this apparent discrepancy be corrected or further explained.

We appreciate the opportunity to comment on the draft document.

Sincerely,


Regional Environmental Officer
Alaska

Khoi M. Le

General Purpose Worksheet

Subject	Page No.	Of
File	By	Date
		6/25/92

Dear Mr. Gaetan :

I'm replying to the DEIS of the SE
Chichagof Project Area.

Although I think development of timber resources
in the area will have adverse effects on
wildlife and fish habitats as well as aesthetic aspects
of the island, I believe the proposal E will
be the best in ~~the~~ minimizing those impacts.

I believe the people of SE Alaska should have
an economically viable project to sustain their livelihood.

Again, I want to mention that Alternative E
is my preferred choice.

Thank you for the opportunity to comment

Khoi M. Le

MR. KHOI M. LE
810 HARPER CIRCLE
ANCHORAGE, AK, 99515



Lynn Canal Conservation, Inc.

Post Office Box 964
Haines, Alaska 99827

TT-10
cc: TM
Chatham

June 23, 1992

Michael Barton, Regional Forester
Box 1626
Juneau, AK 99827

Dear Mr. Barton:

Following are ICC's comments on the DEIS for Alaska Pulp Corporation's Long Term Timber Sale contract for Southeast Chichagof Island.

Most of the Draft EIS is based on faulty assumptions, and therefore the only acceptable alternative is Alternative A-2. No Further Harvest, until these errors are corrected.

Some of the issues identified in scoping meetings have not been adequately analyzed, such as Issue No. 1: the effects of timber harvest and roadbuilding on wildlife habitat. Table S-3, for example, indicates almost no significant difference in habitat capability for various species between the action alternatives and the no cutting alternative. To suggest that clearcutting 4,000 acres will not effect old-growth dependent species like Sitka Black-tailed Deer and Pine Marten is ludicrous. Similarly, cavity nesting birds are shown to be little affected by the proposed cutting, contrary to the vast body of scientific evidence.

The effects of timber harvest and road building on fish habitat are also seriously downplayed. This is apparently due to the phony fish created by the Forest Service's computer model, which assumes that unrealistic numbers of fish will be produced in enhancement projects. The Forest Service also fails to recognize the difference between wild stock and hatchery fish. The statement that "the potential effects on fish habitat and related water quality are minimal for all alternatives" is contradictory to the well documented scientific literature showing severe negative impacts to fisheries from sedimentation, increased temperatures, decreased oxygen, and removal of large woody debris. The undisturbed fish habitat on Chichagof Island will do a far better job of producing quality salmon than hypothetical enhancement projects combined with clearcutting.

The Socioeconomic Impacts of logging are based on faulty economics, particularly regarding the costs of road construction. These need to be reexamined, and practices like amortizing road costs over many years need to be tossed in the woodchuck economics wastebasket. Alternative A would not produce significant adverse effects on the timber industry and its social infrastructure if all processing of Tongass Timber were done locally, rather than exporting raw materials and jobs to the orient. In addition, the Forest Service has not realistically examined the cumulative negative effects of its clearcutting policies on the recreation and tourism industries.

RECEIVED

JUN 23 1992

Encouraging Environmental Awareness In The Upper Lynn Canal

REGIONAL FORESTER
FOREST SERVICE

XI-C Many Haines residents hunt deer in the Project Area. The negative impacts of clearcutting on Sitka Black-tailed Deer are well documented. The No Action Alternative is clearly the best for all subsistence users of deer.

X-A Table S-9 portrays unrealistically low impacts of roads on Primitive and Semiprimitive Nonmotorized recreation. The impacts of road building extend far beyond the five acres of directly impacted soil for each mile of constructed road. People and wildlife can be seriously disturbed by road activity at distances of one mile or more. Given that the action alternatives involve about fifty miles of new road construction, the impacted area will be vast. Of greatest concern is the inevitable increase in poaching following road construction, especially now that the state of Alaska's enforcement budget has been cut. The Forest Service would do well to remember the recent emergency closure on brown bear hunting on North Chichagof that resulted from the severe increase in legal and illegal killing of bears following the excessive logging in those areas.

XII-C The Forest Service appears to be embracing some principles of the "New Perspectives" in forestry, such as leaving standing dead snags, wildlife corridors, minimizing edge effect, etc. LOC supports these practices in principle, but recognizes that business as usual, i.e. commodity extraction to the exclusion of long term environmental health, remains the primary focus of the Forest Service. We suggest that a true new perspective, embracing sustainable long-term small-scale forestry protecting environmental and economic stability, should be adopted immediately by the Forest Service. Selective cutting should be utilized instead of clearcutting or its variants like "shelterwood cutting", etc.

Again, we emphasize that until the Forest Service seriously reexamines the effects of its policies on wildlife, fisheries, local economies, and subsistence use of the Tongass by communities like Haines, Alternative A-2, No Further Harvest is the only acceptable alternative.

Sincerely,
Eric Holle
Eric Holle

VI-B2

VI-B2

VI-E1

V-B

Joan M. McBeen

PO Box 23
 Tenakee Springs, AK
 June 25, 1992

Gary Morrison
 Forest Supervisor
 204 Siginaka Way
 Sitka, AK 99835

Dear Mr Morrison,

I am very upset about the Chichagof draft EIS and feel that the comment period is at the worst time of year for the individuals concerned about the forest and subsistence. I am very concerned about the forest and subsistence in the low turnout in Sitka and Petersburg reflects the bad timing. People in SE Alaska must work for a living and in rural communities, that work is summer seasons. I am appalled by the proposed timber harvest with clearcutting up and down the bay. My husband and I commercial fish

in the Inlet and feel our income will be adversely affected by logging. The salmon bearing streams will be affected and dead and runoff in the water will affect water quality. We also shrimp fish and are concerned about the safety of our gear when log rafts are towed out of the Inlet.

Our subsistence life style will certainly be affected. We have seen a decline in the deer population in the 15 years we have lived in Tenakee. With the cutting of so much more of their habitat, the population can only be further stressed. I also feel any road system will only make deer more accessible and I am therefore opposed to any road connection.

I travel the entire length of the Inlet frequently every year, hunt and fish in the bays and do subsistence gathering in Saltery, Chalk Bays and Goose Flats. I am strongly opposed to the Forest Service plan to clearcut these areas. It does not appear that the Forest Service is considering other uses besides logging in their DEIS for Tenakee Inlet

N-A

XI-B

X-A

XI-B

XI-B

-3-

I appreciate this opportunity to express my concerns about the plans for my home. I trust you will consider them and alter your preferred alternatives to reflect the needs of other forest users.

Sincerely,
Joan M. McBeen

National Marine Fisheries Service

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668



June 15, 1992

Mr. Gordon Anderson
Southeast Chichagof Project Planning Team
USDA Forest Service - Chatham Area
204 Siginaka Way
Sitka, Alaska 99835

RE: DEIS - Alaska Pulp Corporation Long-Term Timber Sale
Contract, Southeast Chichagof

Dear Mr. Anderson:

The Alaska Region, National Marine Fisheries Service (NMFS), has reviewed the subject document and offers the following comments for your consideration.

We concur with the selection of Alternative E as the preferred alternative. However, we believe the DEIS underestimates the overall effect log transfer will have on marine and estuarine habitats. Accumulations of woody debris have been observed in the intertidal and shallow subtidal zones adjacent to several log transfer facilities (LTF) in Southeast Alaska. In some cases this material has persisted for periods of at least 35 years. This results in a long-term effects on the marine environment and biological productivity is reduced in the area covered by woody debris.

The DEIS, Chapter 4, page 200, states that: "There will be no adverse impacts to any federally listed threatened and/or endangered species or critical habitat as a result of this project." We concur with the conclusion of "no affect". Unless the proposed action is significantly modified or if new information becomes available concerning the humpback whale or Steller sea lion, this concludes the USDA Forest Service's Section 7 responsibility under the Endangered Species Act of 1973, as amended.

The correct spelling is Steller not Stellar for the Steller sea lion. Corrections should be made throughout the document.

Chapter 2, page 37. Expressing the effects of log transfer by the loss of habitat from construction and operation of a LTF as a percentage of available surface area is meaningless. Just as upland wildlife use is not evenly distributed over available land, aquatic plants and animals only inhabit areas suitable for growth and reproduction. A LTF placed in an area used by spawning herring will have a much greater adverse affect than a LTF in a area used by few organisms. References related to impact by a percentage of area should be eliminated.

VI-C2

Chapter 2, page 51-2, Threatened, Endangered, and Sensitive Species. This section talks about the Steller sea lion. We suggest it be labeled "Steller Sea Lions". The NMFS has responsibility for the threatened Steller sea lion, therefore, consultation regarding this marine mammal should be limited to the NMFS.

VII-B2

Chapter 3, page 120. The DEIS gives the impression that the Crab Bay and False Island LTFs are built and ready to transfer logs. This is not the case. The Department of Army permit is currently valid, however the facilities are in disrepair and need to be reconstructed before they can be used. Further, both facilities were of the lift-off type and the permit is only good to rebuild the original footprint. Construction of a low-angle slide LTF on each site will require modification of each existing permit.

VII-B-3

Chapter 3, page 121, 8) Trap Bay. If the permit to construct a LTF expired on 2/12/91 as indicated, Department of the Army authorization is again necessary before a LTF can be constructed at the Tenakee Inlet 27 location in Trap Bay.

XIV-C1

Chapter 4, page 43, Table 4-38. The numbers for Value Comparison Unit (VCU) 232 under Alternative E seems to be reversed. The numbers indicate that there will be more old growth in the year 2011 than in 1996. If the table is correct, where will the old growth come from?

VII-B2

Chapter 4, page 164. The document again gives the impression that the LTF at False Island is active. The facility is in disarray and has to be completely rebuilt before it can be used. This should be made clear in the FEIS.

VII-A3

Chapter 4, pages 166-167, Direct Effects. Bark debris accumulation varies from location to location because of many factors, not just bottom slope and tidal and wave action. Topography of the bottom, currents, exposure to storm action, method of log transfer, and log handling also determine bark debris accumulation.

VI-B3

We agree that the loss of productivity in the marine environment is difficult to assess. We do not, however, agree with the DEIS equating the value of the area affected to a percentage of a total area. Effects are determined by the value of the aquatic habitat impacted. Not all habitats within a given estuary or bay are of the same value. Destruction of a spawning area by filling or the deposition of woody debris is more damaging than if the activity were to affect a sandy beach with no life. The adverse effects of a project on aquatic productivity cannot be expressed as a percentage of the total area affected.

VI-A3

Chapter 4, page 171, paragraph one. The length of time woody debris remains at a LTF after use is variable. However, we have observed extensive bark coverage after 35 years of inactivity. Viable populations of macro-infauna can be affected or eliminated



for several decades (Conlan & Ellis, 1979). Conlan (1977) found marked alterations of sand bed infauna with as little a 0.8 cm of bark accumulation. She also found that molluscs and several polychaete species are virtually excluded by bark accumulations greater than 2.5 cm. Log transfer does have a long-term effect on marine organisms where woody debris accumulates.

VI-82

Chapter 4, page 189, False Island LTF. The last sentence states that a low-angle slide has been built. Currently, this is not true. A Department of the Army permit has not been issued for a slide facility at False Island. All references (pages 191-2) to low-angle slide LTFs being constructed at Crab Bay and False Island should be corrected to state that it is intended to construct a slide facility as those locations.

We appreciate the opportunity to comment.

Sincerely,

Steven Pennoyer

Steven Pennoyer
Director, Alaska Region

LITERATURE CITED

Conlan, K.E. (1977). The effects of wood deposition from a coastal log handling operation on the benthos of a shallow sand bed in Saanich Inlet, British Columbia. M.S. Thesis, Univ. of Victoria, British Columbia. 203pp.

Conlan, K.E. & Ellis, D.V. (1979). Effects of wood waste on sandbed benthos. Mar. Pollut. Bull. 10, 262-267.

Kate Palmer

Re: D.E.I.S. SE Chichagof Island Timber Harvest
A.P.C. long term contract

Box 1324
Haines, AK 99824
June 21, 1992

TO: Michael Burton, Regional Forester

Once again the U.S.F.S. has used its FOREPLAN computer model to manipulate select data to arrive at select conclusions. It is possible that the no-cutting alternative A2 will cause essentially the same percent population reductions in HIES as alternative B through F. Each of which represents a harvest on 105,000 MBF. Undoubtedly it is the FOREPLAN model that has also created more "paper fish" from "paper fish" when current projects have very existence + success of which the F.S. is relying on to substantiate its claim that fish habitat + water quality will be minimally affected by alternative B through F. This is the same claim the F.S. made for clearcuts on Prince of Wales Island. That subsequent results in massive pink salmon kills in 1990. It is well documented that clear cutting causes increased siltation and temperature which in turn cause loss of fish spawning + rearing habitat.

Why is there a significant possibility of a significant restriction of subsistence use of deer in the project area expected under all alternatives, even A2? This is obviously the result of the cumulative negative impacts of past timber sales. The very same individual impacts that the F.S. is downplaying in this D.E.I.S., but whose cumulative effects will undoubtedly be reflected in the next harvest proposal. In any case, I have eaten deer meat from Chichagof Island + hope to eat more in the future.

In spite of its manipulation of data to arrive at select conclusions the F.S. cannot manipulate the environment to speed up rotation periods or to create new old-growth forests. All remaining old growth must be permanently protected.

A2, the no-cutting alternative, is the only acceptable alternative. Alternatives B through F would not only create negative visual impacts + have negative effects on subsistence values, but would also cost U.S. taxpayers money. The F.S. estimates that alternatives B, D, + E are not economic alternatives. They

don't reveal is that were the real-building costs not another alternative C + F would also appear as the non-economic, or that they are short-sighted F.S. policy not only causes long-term + irrevocable ecological damage to the natural resources of the Tongass, "property" of all U.S. citizens, but also forces the same U.S. citizens to subsidize this destruction with their tax dollars.

It is high time the F.S. emerge from the dead-ages + admit the devastating effects that their its clearcutting mandate has on the physical environment, and in turn on the socioeconomic structures of S.E. communities. Timber harvest cannot go on indefinitely at current rates of cutting. The very resource base upon which S.E. communities depend is being destroyed by the agency charged with its protection.

Timber harvest from public lands must not be subsidized by U.S. tax dollars. Alaska must cease to be a resource extract colony for the Japanese. Timber harvested from the Tongass should be processed completely in Alaska so that the local economic receive the maximum benefit from each log.

I support alternative A2. I support continued subsistence use of this area uncompromised by more timber harvest.

Sincerely,

Kate Palmer

KATE PALMER

2

Robert A. Pegues
P.O. Box 61
Tunnel Springs, Alaska 99841

Mc Gordon Anderson
S.E. Chirikof Project Planning Team
USDA Forest Service
204 Siginaka Way
Sitka, Alaska 99835

Dear Mr. Anderson

Although your draft document is considerably improved over past efforts, it fails to meet the tests of NEPA and ANILCA (190).

Its limited range of alternatives, discounting the no logging alternative, points to a predetermined decision that the project area should graduate around 100 million board feet of timber. Regardless of the harmful effects such schemes would visit upon subsistence and other forest uses.

The DEIS fails to demonstrate the need for the level of cutting in the project area, or called for in the action alternative. This is particularly so in light of the admitted degrading effects to subsistence habitat, not to mention the court ordered release of (BSEs) other cutting areas within the project area.

Clearly wise stewardship requires that Forest Managers should develop a wider range of alternatives, including other lands where the project's impacts on subsistence would be fewer and more benign.

One cannot accept the assertion that "The Project Area's remoteness makes it very unlikely that an individual would hold or even an entire community is highly dependent on specific areas within the Project area that may be affected by proposed action". This statement is ^{contradicted} by the documents upon findings in regard to Tunnel Springs. Have you no shame?

Robert Pegues

Doug Sanvik

3-

XI-C1

Many of US, and the Congress
approved in the Rezone Act, disagree
with your continued contention that
Logging is the highest and best use
of these lands.

1-A

You fail to prove that ^{other} areas
with fewer conflicts do not exist.

The DEIS has done a good job
of describing subsistence use, it is
misses the target, however, in the
development of project alternatives;
is weak on Section 10 determinations
and requirements; is unclear on cumulative
effects of Forest will; lacks specifics
relating to mitigation of subsistence
impacts and subsistence monitoring; and in
failing to incorporate DEIS timber and
other areas, fails to justify the selection
of SE Chichagof as a Project.

Sincerely,

Robert A. Pegues

PJB

Box 774

Haines, AK 99827

June 27, 1992

Michael E. Barton
Regional Forester
U.S.F.S.

Dear Mr. Barton,

In regards to the SE Chichagof
Draft EIS I support Alternative
A2. However, I don't support
making the timber available in
another area to meet contract
requirements. It's time that the
government stopped giving away
its forests. It's time the
U.S.F.S. stopped endorsing clearcutting.



Sincerely,
Doug Sanvik

Doug Sanvik

Lee M. Schmidt

P.O. Box 1110
Sitka, Alaska 99835
June 2, 1992

Southeast Chichagof Project Planning Team
USDA Forest Service - Chatham Area
204 Iziginaka Way
Sitka, Alaska 99835

Dear Team Members:

In response to the Draft EIS for West Chichagof, I would like to submit the following comments:

I am a twenty-two year resident of Sitka and I have used Southeast West Chichagof for subsistence activities. I have reviewed the Draft EIS for APC harvest in this area and considered the impacts of the various alternatives.

I support Alternative F for several reasons. I prefer to see timber harvest in watersheds that have already been entered, which leaves more roadless areas unentered. I do not like to see roads and log transfer facilities

Open summary states there will be four log transfer facilities but table S-6 shows only three (see Alternative F).

Yours truly,
Lee M. Schmidt

Southeast Alaska Conservation Council

Southeast Alaska Conservation Council

SEACC 419 Sixth Street, Suite 328 Juneau, Alaska 99801 (907) 586-69



June 29, 1992

Gordon Anderson, Team Leader
Southeast Chichagof Project Planning Team
USDA Forest Service, Chatham Area
204 Siginaka Way
Sitka, AK 99835

re: comments on DEIS for Southeast Chichagof timber sale project

Dear Gordon:

These comments are submitted by the Southeast Alaska Conservation Council (SEACC) on the Southeast Chichagof APC Long Term Sale draft EIS (DEIS). We believe the description and analysis of impacts in this DEIS to subsistence uses and wildlife is much improved over past efforts. In particular, the maps revealing past and proposed clearcuts and roads are much better than previous efforts. SEACC is also pleased that none of the alternatives considered in the DEIS enter Long Bay or Seal Bay. We are further pleased that no road was proposed for the valuable Kadashan watershed.

Nonetheless, SEACC believes that this DEIS violates NEPA, ANILCA, the Clean Water Act, and the Tongass Timber Reform Act (TTRA). The inadequacies of this DEIS, particularly the range of alternatives considered, are so fundamental that a SUPPLEMENTAL DEIS must be prepared. Consequently, SEACC can not support any of the proposed action alternatives.

GENERAL COMMENTS

Well here we go again! Once more the Forest Service has released a document, and held subsistence hearings on a proposal which is of great importance to the residents of Angoon, Tenakee, and Sitka, at precisely that time of year when those most affected have the least time available to participate in the planning process. Either the Forest Service simply doesn't care about obtaining meaningful public comment, or it releases environmental documents for sensitive areas at a time when it knows that a large body of the affected public cannot participate. It is no wonder that there is such a lack of understanding by the Forest Service of subsistence and its implications to rural communities.

Despite Congressional instructions in the TTRA, this DEIS reflects that timber is still king--in the Chatham Area. For example, Timber and Silviculture apparently have adequate funding to support substantial field work, while other specialties are significantly or totally crippled by lack of funds and manpower. Another example is the fact that the range of alternatives considered in the DEIS all consider high timber yields, relative to the land base. This is inconsistent with comments from a substantial number of Southeast Alaska residents that logging of this intensity is simply not acceptable. This DEIS further supports our contention that the contract revisions made to the APC long-term contract are incorrect and integrally connected to the problems in this DEIS.

Requirements of the Tongass Timber Reform Act (TTRA)

1. The Forest Service fails to show a "need" for the proposed action. Section 705(a) of ANILCA, as amended by the TTRA, requires that timber sale offerings must not exceed actual market demand for timber. Therefore, the DEIS should have fully evaluated and explained whether making available approximately 130 mmbf of timber (net plus utility) as proposed under the Preferred Alternative from the Southeast Chichagof project area is necessary in order to meet actual market demand. This analysis must be included in the SUPPLEMENTAL DEIS.

2. Forest Service failed to conduct adequate field reconnaissance for developing this project's sale area design. The timber sale preparation process utilized for this DEIS is inconsistent with law and explicit agency policy and procedure.

The first unilateral contract modification contained in Section 301(c) of the TTRA requires all timber sale planning, management requirements, and environmental assessment procedures to be consistent with such procedures for independent national forests timber sales. Both NEPA and the CEQ regulations require the Forest Service to "utilize a systematic, interdisciplinary approach which

We request that all of the following documents be incorporated into the planning record for the Southeast Chichagof timber project: Memorandum from Kallick, Special Project Attorney to Sisk, SEACC Executive Director, Feb. 14, 1991 (Analysis of TTRA Long-Term Contract Modifications); Letter from Lindekugel, SEACC Staff Attorney to Barton, Regional Forester, Mar. 18, 1991 (with attachment: SEACC's Critique of Forest Service's "Revision Package"); and, Letter from SEACC, Sierra Club Legal Defense Fund, and Wilderness Society to Peach, Asst. Comptroller (April 17, 1991) (Response to GAO Report on Forest Service's Long-Term Contract Revisions).

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will insure the integrated use of the natural and social sciences and the environmental design arts in planning and decision making" See NEPA, § 102(2)(A), 42 U.S.C. § 4332(2)(A); 40 C.F.R. § 1502.2(a).

Chapter 30 of the agency's Timber Sale Preparation Handbook requires the planning team to conduct adequate field reconnaissance during the "environmental analysis" or "Gate 2" phase of sale design development. "In every case, conduct the environmental analysis so that the sale is based on field reconnaissance (emphasis added)...." In describing the "field reconnaissance" step, the Handbook further provides:

Gate 2 is where the most critical decision are reached and the greatest expense tends to occur. Avoid too much reliance on summarized data and "paper" design. Conduct a much more intensive field reconnaissance than was done for gate 1. Leave enough flagging, stakes, marks, or other tracks in the field so that the selected alternative can be implemented with the least amount of effort and chance for error during the sale plan implementation phase.

FSH 2409.18, Chapter 30 at 31.1 (1988).

On page 2-3 of the DEIS, the Forest Service claims that "a systematic, interdisciplinary approach was used in developing the timber harvest unit and transportation system plans for this project." After analyzing the unit cards which document this sale area design, however, we must conclude that this statement is untrue. Our analysis show that neither a systematic, interdisciplinary approach nor an "intensive" field reconnaissance was conducted for all cutting units in the proposed alternatives. Of the 172 potential cutting units for this timber sale, silviculture and timber specialists reviewed only 66 percent and 76 percent of the units, respectively. Most disturbing was the complete lack of field reconnaissance of these units by fishery personnel. The numbers of units visited by other appropriate specialists were (by discipline): Soils-16 percent; Wildlife-50 percent; and, Hydrology-0.5 percent. Moreover, none of the proposed cutting units or roads were traversed by an archeologist in order to identify "any" and "all" historic resources which the proposed development could adversely impact.

The lack of a systematic, interdisciplinary approach during sale preparation, as well as intensive field reconnaissance for all proposed units, must be remedied. Assurances that remedial field work will be conducted prior to "release" of any units to APC fail to provide sufficient notice to members of the public currently reviewing the DEIS. As noted in the Handbook, Gate 2 is where the most critical decisions are reached and the public is entitled to

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be fully informed of the basis for such decisions and have the opportunity to comment on them.

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We must also note that unit card entries show that entries for particular specialties (eg., soils, wildlife and fisheries) were made by personnel unqualified in those specialties. It appears that the Chatham Area is following steps taken by the Ketchikan Area to assure that nothing interferes with supplying timber to the long-term contract holders. In the Ketchikan Area, the Forest Service has brought up additional timber layout specialists without a corresponding increase in other specialties such as fisheries and wildlife personnel. Thus, personnel unqualified in fisheries biology are making determinations regarding whether particular streams in a cutting unit require the minimum 100 foot buffer required by law. As a consequence, salmon and valuable resident fish streams are misidentified or missed completely and valuable riparian habitat is destroyed.

Did the planning team for this project have sufficient qualified personnel available to properly develop the sale designs disclosed in this DEIS? To what extent does this type of "paper planning" result in unit layout personnel having to correct mistakes in the field after a record of decision is issued in the Chatham Area? How many units approved in the Supplemental EIS for the 1981-86 and 1986-90 APC Operating plan were changed during the sale implementation phase? What steps will be taken by the Forest Service to minimize such changes outside the public process? The public deserves to have answers, and corroborating evidence, to these questions disclosed in a SUPPLEMENTAL DEIS for this sale.

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3. Forest Service's rationale for concluding that the modified APC contract requires providing a 3 year standing timber supply to APC is flawed and inaccurate. In several places within the DEIS, the agency implies that changes to long-term contracts, which were mandated by Congress in the TTRA, now force it to provide a 3 year standing timber supply to APC. This is simply not true.

Section 301(c)(3) merely requires that all timber that is offered to APC be harvested within three years. There is no provision in law requiring a three year timber supply. Meeting the remaining volume of timber under the modified APC contract will only require providing an average volume of 105 mmbf/yr. Yet the DEIS states that the contract requires the Forest Service to now make a minimum of 240 mmbf, and eventually a minimum of 360 mmbf, available on an annual basis! This is outrageous and contrary to Congressional intent. By interpreting section 301(c)(3) as a timber supply requirement, the Forest Service has turned a provision intended to prevent APC from accumulating a timber supply "backlog" on its head!

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4. Forest Service's treatment of buffers is incomplete. Your document is replete with assurances that, since the TTRA requires mandatory 100 foot buffers, impacts to fisheries will be very minimal. However, the TTRA only requires maintenance of a minimum 100 foot no-cut buffer along Class I streams, and Class II streams which flow directly into Class I streams. NEPA still requires that the agency consider and evaluate whether it is necessary to provide additional buffer protection. Although we are pleased to see variable buffers specified in the DEIS (Table 4-52) for many proposed units, the invalid sale preparation process that was performed leads us to question whether the proposed variable buffers are in fact sufficient. Proper planning would dictate that buffer needs be well studied in the field for each segment of each stream adjacent to proposed logging units and roads. Adequate buffer prescriptions require well integrated work by a soil scientist, a hydrologist, a fisheries biologist, and either a silviculturist or timber specialist. This necessary level of interdisciplinary work has not been done for this DEIS.

Moreover, the DEIS fails to analyze measures to protect the integrity of the no-cut buffer from various hazards, such as windthrow and the logging of timber adjacent to the buffer. Steps to be taken by the Forest Service to prevent windthrow damage to the buffer should be explained and evaluated. No mention was found in the DEIS of the practice of removing "hazard" trees from the buffer strip within 50-feet of roads and bridges, falling snags in buffers that are adjacent to cutting areas for safety reasons, and using trees inside or adjacent to the buffer for tailholds. The impact of these management practices on riparian habitat and long-term integrity of the buffer strip must be evaluated. It is our position that any "hazard" tree felled within the buffer strip during road and bridge construction should be left on the ground. This is the only practice which is consistent with the buffer's purpose of providing a source for the long-term recruitment of large woody debris in to the stream.

Furthermore, nowhere in the comments on any of the unit cards or road cards is any mention made of how, or where, roads which must cross Class I and II streams should do so. Buffers are mapped on the cards, but their widths are not specified, and the scale of the maps varies significantly from one map to another making even an estimate difficult.

5. Serious questions regarding agency compliance with the TTRA's proportionality requirements. While you claim to fully comply with the proportionality requirements of the TTRA, serious discrepancies exist with your data and analysis. Over the past 2 years SEACC and others have repeatedly expressed objections to the Forest Service's interpretation of Section 301(c)(2) of the TTRA, the adequacy of the timber/type database, and how the Forest Service implements the TTRA's highgrading prohibition. Because the

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Forest Service continues to act like an ostrich, by sticking its head in the sand and refusing to work with others to correct these problems, repeating previously made arguments is futile. Instead we request that the entire appeal record for Appeal # 92-13-00-0082, including all exhibits filed by the appellant and intervenors, be incorporated into SEACC's comments on this DEIS.

NEPA Comments

1. Alternatives

Both NEPA and ANILCA demand a thorough consideration of alternatives. However, this DEIS fails to consider an adequate range of alternatives. This fact is particularly troubling because the agency apparently has considerable latitude in how much timber comes from Southeast Chichagof.

The alternatives presented to the public include two no-action alternatives and five action alternatives. First, we must question the assumption underlying both no-action alternatives "that additional timber volume would not be available from somewhere else within the APC Long-term Timber Sale Contract area." What is the basis for this assumption? In Appendix A (at A-5), the Forest Service claims that going outside the long-term contract area "would decrease the availability of timber for the independent timber sale program, including the Small Business Set Aside program." The discussion goes on to assert that "[e]limination of short term sales under the independent and set-aside timber sales [by presumably going outside the long-term contract area] would translate into a loss of between 815 and 1144 timber related." This argument lacks any credibility because both mills eligible for set-aside timber sales have shut down in the past two years; thus there is no viable set-aside program left on the Tongass today. In order to support its assumption, the Forest Service must disclose an accurate portrayal of the independent and set-aside timber programs existing TODAY on the Tongass.

Furthermore, it appears unnecessary to go outside the contract area at all because a no action alternative is being considered. Consideration of the no-action alternatives does not result in an immediate breach of the APC contract because other timber lands within the contract area could be used. A no-action alternative does not preclude considering future actions in the same area; it does, however, preclude taking the proposed action in this project area now. After all, the decision to provide timber volume from this project area at this time has not yet been made. In fact, reaching such a decision is the exactly why the Forest Service is currently preparing this EIS.

However, the narrow range of action alternatives proposed in this DEIS imply that a decision, outside the public process, has

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already been made to supply at least 108 mm³ from the project area to APC. Contrary to the purpose of designing alternatives in order "sharply defin[e] the issues and provid[e] a clear basis for choice among [the] options," 40 C.F.R. 1502.14, the Forest Service only considered those alternatives which would provide APC with at least 108 mm³ of timber. The range of alternative does not recognize the subsistence, cultural, and non-timber economic dependency of Angoon and Tenakee, nor the subsistence and recreational needs of Sitka and the sport hunting needs of Juneau. Substantial conflicts over logging on the Tongass remain despite passage of the TTRA. In the face of these unresolved conflicts over resource use, it is shameful that the Forest Service has issued a DEIS with such a narrow range of alternatives.

These are major issues and must be considered in developing a range of alternatives for the proposed action. These issues were raised by SEACC and others in scoping comments submitted on this proposal. The Forest Service, however, failed to use issues raised by the public to define the alternatives considered in this DEIS. Instead, the Forest Service went blithely along and designed the alternatives to satisfy a predetermined decision -- to supply a minimum volume of timber to APC from this project area at this time. This practice violates NEPA and the CEQ regulations.

We agree with the City of Angoon that while the Forest Service has identified subsistence as a key issue, it failed to squarely address it with a subsistence alternative. Angoon and Tenakee deserve to have their interests fully represented in an alternative. These interests include the economics and cultural implications of subsistence, existing and potential recreational guiding employment, and the availability of fishing and anchoring areas for commercial and sport fishermen, and small value added timber processing for Tenakee. The fact that such alternatives may result in APC asserting a contract claim is irrelevant; the purpose for choosing alternatives is to "sharply defin[e] issues and provid[e] a clear basis for choice among [the] options." See 40 C.F.R. 1502.14. Moreover, the Forest Service has the legal authority to consider alternatives "outside of its jurisdiction," or in this case inconsistent with its contract obligations. To clarify, the issue is not whether the Forest Service selects an alternative that is inconsistent with the contract, but only whether it considers such an alternative.

Other reasonable alternatives which should have been considered include:

- alternative(s) that consider providing all or some of the contract's volume requirements from areas outside the APC contract area;
- alternative(s) that would meet or exceed the Alaska

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Department of Fish and Game's minimum population objectives for deer in each of the WAA's within the project area;

c) alternative(s) designed to provide maximum protection for high production stream systems important for sport, subsistence, and commercial fisheries, such as Sitkoh Creek and Lake, Basket Bay/Kook Lake, Crab, Slattery, Seal, and Long Bays, Broad Finger Creek and Broad Creek;

d) alternative(s) which protect and maintain customary and traditional use areas important to all the affected communities.

2. Cumulative Impacts

The DEIS fails to comprehensively address cumulative impacts from past, present and future logging in the APC contract area on subsistence, recreation, tourism, and commercial fishing interests who will be affected by this proposed project. The Forest Service continues to break up its cumulative impact analysis by focusing only on impacts within the project area and ignoring other ongoing or reasonably foreseeable projects. For instance, the agency isolates the cumulative impacts from this proposed project and the impacts to the subsistence, recreation and commercial interests of Angoon, Tenakee, and Sitka from the Kelp Bay project which was recently approved, and the previously enjoined 86-90 units which have just been released. No mention is made of the Ushk Bay or North and East Kuiu timber sale projects and synergistic environmental effect of all these projects on the subsistence, recreational and commercial interests of residents of Sitka, Angoon, and Tenakee. Neither is it clear as to what effect this project, when considered with all past, present, and reasonably foreseeable future actions within the APC contract area, will have on other affected communities, such as Kake, Petersburg and Port Protection. This lack of analysis is simply unacceptable, and its absence requires preparation of a SUPPLEMENTAL DEIS for this sale.

The Forest Service will suggest that the cumulative impact of the other actions has been addressed in the Supplement to the DEIS for the TLMF Revision (SDEIS). However, that purported analysis has been challenged as inadequate by SEACC and others and is still only in draft form.² Such a "draft" analysis can not fulfill the agency's duty under NEPA to consider potential impacts of an action before the action takes place. The CEQ regulations only permit tiering "[w]henver a broad [EIS] has been prepared." See 40

² We incorporate all comments and exhibits submitted by SEACC on December 6, 1991 regarding the SDEIS (hereinafter cited as Official SEACC Comments on TLMF Revision SDEIS) into the planning record for this sale.

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C.F.R. 1502.20 and 1508.28. Thus, tiering to any analysis contained in the SDEIS is premature until the final EIS for the TLMF Revision "has been prepared."

Tiering to the 1979 TLMF is inappropriate as well for some issues such as subsistence because the TLMF was drafted before Section 810 of ANILCA was drafted. Moreover, TLMF does not contain any cumulative environmental impact analysis of timber harvest operating plans scheduled for implementation over the life of the APC contract. The current TLMF fails to provide sufficient direction regarding important management requirements such as maintaining viable wildlife populations. The current TLMF also fails to adequately meet the needs of resource-based industries other than timber, or adequately provide for non-commodity uses of forest resources, such as subsistence and recreation, as required by the TTRA. Thus, tiering this project to an outdated forest plan is simply inadequate.

In order for the Forest Service to deal honestly with the general public, SEACC strongly suggests that you produce a programmatic EIS for all these "timber offerings" until the year 2011. SEACC has repeatedly requested that your agency produce a clear and understandable Programmatic EIS for the life of the sale for APC (and KPC) so the general public can be shown what the long haul will look like. Your current piecemeal approach, which shotguns EISs at the public without any real linkage to the overall long-term contract timber sale program, is sorely inadequate and terribly unfair to the general public. Such an analysis is not speculative because, as noted above, this DEIS reflects a predetermined decision to provide APC with at least 108 mmmbf of timber from this project area at this time. This decision, however, was made outside the NEPA process and without the required public input.

3. Site-Specific Impacts

Given the incomplete field work done during sale preparation, the lack of field verified information in the DEIS raises serious concerns over the adequacy of impact estimates on fish, wildlife, and other forest resources made throughout the DEIS. After all, concern about the adequacy of environmental analyses performed before 1990 for the long-term timber sales was the precise reason Congress modified the long-term contracts to standardize timber sale administration on the Tongass. See e.g., 136 Cong. Rec. H12834 (daily ed. Oct. 26, 1990) (statement of Congressman George Miller).

4. Recreation

The major human activities taking place in the project area at this time are subsistence hunting and fishing, commercial

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fishing, tourism, guided hunting and fishing and private recreation. These last three fit into the outdoor recreation category, yet we believe that your document fails to adequately address the serious level of negative impacts that the project will have on high-quality outdoor recreation.

The DEIS concludes that the overall consequence to recreation in the Southeast Chichagof project area is a substantial change in the Recreation Opportunity Spectrum (ROS) available in the project area from Primitive and Semiprimitive Nonmotorized ROSs to Roaded Modified. See SDEIS at 4-174. Although the agency recognizes that such a shift represents "a net loss of recreation capacity," the agency claims that the shift is only "a minor impact under each alternative, when viewed forest wide." However, the DEIS fails to provide any information to support this contention. SEACC incorporates its comments on the SDEIS' recreation analysis into these comments. See Official SEACC Comments on TLMF Revision SDEIS 83-91 (Dec. 6, 1991).

The DEIS accurately states that many logging activities are incompatible with existing recreation activities -- and cite that 50% of the current activities taking place in Recreation Places rely upon the natural appearance of the area. See DEIS at 4-177. The proposed action will have dramatic impacts on the natural appearance of this project area, and the DEIS states that it will take at least 40 years after active logging before a "natural appearance" returns.

The most alarming statements in your document note that there will be substantial and significant losses in primitive and semi-primitive non-motorized recreation opportunities, but since there are similar recreation opportunities nearby and elsewhere in the Tongass, then the impacts are O.K.! See DEIS, at 4-174. This conclusion is unsupported by the Alaska Division of Tourism marketing studies which indicate that "scenery, forest, mountains, out-of-doors" and "wilderness, unspoiled, rugged" were the top interests appealing to potential visitors. These marketing studies contradict the unsupported claim that "[p]references of recreational users vary greatly." Although these marketing surveys were quoted from in the Kelp Bay FEIS, this information was not disclosed in the Southeast Chichagof DEIS.

Residents of the Tongass and visitors seeking the previously existing high-quality natural outdoor recreation experience will be displaced, and will have to go elsewhere for their recreation. This will not only be disruptive to existing users, but will also place additional recreational pressure on other natural areas in the Tongass. Overall, the result is a general lowering of the availability of high-quality outdoor recreation opportunities, and a reduction in this important economic sector in the region. We are disappointed that the DEIS downplays this situation. The DEIS

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also fails to adequately recognize or analyze this "domino effect" as a serious cumulative impact over time as the Forest Service proceeds to process future "timber offerings" under the APC contract. This failure to fully describe and analyze the cumulative impact from past, present, and future logging projects on the availability of high-quality outdoor recreation opportunities in the APC contract area must be corrected in the final EIS.

The claim made in the DEIS (at 4-181) that outfitters and recreation users have "several options" to develop recreation opportunities that are not dependent on a natural setting is unsupported. The lack of serious information on these issues is reflected by the lack of information disclosed on sport fishing impacts. Schwan's objectives as disclosed in the Strategic Plans for the Juneau, Ketchikan, and Sitka Recreational Fisheries were not disclosed or analyzed. There is no evidence, whatsoever, that the public is interested in coming all the way up to Southeast Chichagof to recreate in a clearcut.

5. Mitigation

While there are some very good ideas noted in your "Mitigation Measures Common to All Action Alternatives" section, these need some real teeth and rigid follow-up in order to be effective over either the short or long term. We believe that you should present a detailed, site-specific mitigation and monitoring program and timetable for each of the alternatives as part of this DEIS. This program must be prepared for public and agency review in the SUPPLEMENTAL DEIS.

Unfortunately, there is no guarantee in your document that assures the public that any or all of the mitigation measures will be approved or enforced. Given our analysis of the unit cards described above, the Forest Service's claim that mitigation measures to protect wildlife and fisheries were "built into the design of the alternatives," is unsubstantiated. Nevertheless, in addition to measures cited in your document, we strongly suggest that the following measures be adopted:

- (1) Restriction of activities near salmon streams during spawning season, and near eagle nest trees during sensitive nesting and rearing times;
- (2) Scheduling timber cutting to avoid important subsistence seasons, and making subsistence use patterns a major criteria for the selection of roads and cutting units;
- (3) Preventing the use of roads for access for hunters, trappers and fishermen by establishing an effective road closure program in the project area;

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- (4) Strictly prohibiting hunting and fishing by logging company employees and agency staff in the project area. This is not a new idea, and has been used effectively in other remote areas to mitigate serious impacts on fish and wildlife resources and subsistence uses. For example, this policy is in place at the Greens Creek Mining project on Admiralty Island.

6. Monitoring

While we are pleased that the Forest Service is paying more attention to its responsibilities under NFMA and NEPA to monitor forest activities, several problems must be addressed. The Forest Service claims (DEIS at 2-46) that planning for implementation monitoring began during the design of the timber sale. However, as already noted, the Forest Service failed to design this sale consistent with the law or its own planning handbook. Thus, the Forest Service's reliance on unit cards to be "the basis for determining whether recommendations were implemented for various aspects of this timber sale" (DEIS at 2-47) is arbitrary. We are further concerned because the agency fails to do anything more than list implementation monitoring activities which it "expect[s] to take place." Monitoring is not a discretionary responsibility; it is a duty required by law. If the agency has information suggesting that monitoring plans may not be fully carried out, then it as a duty to disclose such information. We further believe that the agency can legally approve only that level of activities which it has the resources to properly monitor.

Next, the Forest Service passes responsibility for validation monitoring to the Regional Office. Given the complete lack of validation monitoring data included in this DEIS or the SDEIS for the T1MP Revision, it is unreasonable to assume that the Regional Office will in fact perform this monitoring. Validation of the models and assumptions used for each project planning effort must be the responsibility of the Area and/or District in which the project occurs.

Finally, given the fact that the Forest Service has never developed a comprehensive monitoring program for the Tongass, we believe a significantly greater number of projects should be monitored than proposed. For example, the proposal to spot check 20 percent of the units "within proximity to anadromous fish streams" for compliance with the TTRA's buffer requirements seems far to low to insure compliance. Given the Forest Service's failure to conduct a systematic, interdisciplinary field reconnaissance program in the design of this sale, we must question the accuracy of your baseline. After all, if a timber specialist misidentified or completely missed a salmon stream during unit layout, then that unit would fall out of the study sample of units "within proximity to anadromous streams."

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6. Cultural Resources

There have been significant cultural costs to Angoon from past logging. Angoon has stated eloquently the tragic treatment of the sacred Basket Bay village site. The treatment of cultural resources in the DEIS, particularly the agency's failure to inventory and fully describe all eligible and potentially eligible properties within the project area and to consider alternatives for reducing adverse impacts from this project on those properties, is of great concern to us. According to the DEIS (at 3-61), "[m]ost of these surveys have been conducted at the basic cursory level."

We are unconvinced that the proposed "probability survey design" will provide the necessary information. Under this survey, High Probability Zones are defined as areas from sea level to 100-foot elevations. However, as noted by Dr. Madonna L. Moss, an Assistant Professor of Anthropology at the University of Oregon, the fact that most of the known archaeological sites in Southeast Alaska are located along current shorelines is largely a result of survey bias. "In other words, archaeologists have focused on shoreline surveys and this is where we have found sites (a self-fulfilling prophecy, so to speak)."³ Dr. Moss also advises that given the occurrence of "uplift" in Southeast Alaska early sites may have risen significantly above the current shoreline.

The DEIS (at 4-108) also informs the public that the survey is still being prepared and will be applied (4-111) before logging activities take place. This "solution" violates NEPA and the National Historic Preservation Act (NHPA), as well as the October 9, 1991 direction from the Chief of the Forest Service to Regional Foresters regarding the need to schedule the evaluation of effects on cultural resources in the NEPA process.

Compliance with the NHPA is to begin simultaneously with preparation of information for the DEIS. This is required because of the importance of public participation in agency NHPA compliance activities, and the fact that commenting on the DEIS provides the

³ See the attached letter from Dr. Moss, University of Oregon, to Becky Knight, Narrows Conservation Alliance (May 6, 1992).

⁴ Dr. Moss cites a 1985 study by Robert Ackerman, et al., Archaeology of Heceta Island: A Survey of 16 Timber Harvest Units in the Tongass National Forest, Southeastern Alaska (Center for Northwest Anthropology, Project Report No. 5, Washington State University, Pullman). Inexplicably, this relevant study was not disclosed or considered during preparation of this DEIS. This must be corrected for the SUPPLEMENTAL DEIS.

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public with the primary vehicle for such participation. No exceptions are allowed because (see 4-108) inventorying the project area "would be too costly and impractical." Having chosen to propose a timber sale within the Southeast Chichagof Project Area, the Forest Service can not now rely on the alleged expense or impracticality of locating and inventorying cultural sites as an excuse for precluding the public's involvement in the protection of this area's cultural history. Further, claims that the agency will conduct "complete archaeological surveys" before the beginning of logging activities denies the public their opportunity to comment on effects from this proposal and alternatives to reduce those effects.

The Forest Service must also be reminded of its trust obligations to Native Tribes. Both Sitka and Angoon have formal Tribal Governments. No where in the DEIS, however, is there an acknowledgment of this trust responsibility nor is this responsibility reflected in the alternatives developed. The Forest Service's obligations include protecting the cultural and economic well-being of tribal members.

To correct these serious problems, the Forest Service must complete a thorough inventory and describe the direct and indirect effects from this action on those inventoried sites before issuing the SUPPLEMENTAL DEIS for this project. Preparation of the SUPPLEMENTAL EIS would further allow the public the opportunity to comment on the agency's determination before further disturbances of land and inter-tidal areas take place in the project area.

7. Economic and Social Analysis

The economic and social effects analysis contained in this section is entirely one-sided. The DEIS assumes that the timber industry is the only sector of the economy that will be affected by this logging proposal and that all the effects will be beneficial. Once the Forest Service trumpets the benefits to the regional economy from maintaining existing levels of job opportunities in the timber industry (see 4-115 to 4-120), it must also fully disclose and analyze the costs associated with achieving this goal. The Forest Service can not tip the scales of this Economic and Social Analysis by promoting possible benefits from maintaining the APC pulp mill and Wrangell sawmill while ignoring costs associated with continued operation of these mills. Simple logic, fairness, and the premises of cost-benefit analysis, let alone NEPA, demand that the Forest Service conduct a cost-benefit analysis objectively. There can be no "hard look" at economic costs and benefits unless all costs, including environmental, health and social costs from continued mill operation (or shutdown) are disclosed. Consideration of this information is critical for decision makers and the public to rationally choose between alternatives.

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V-B subsistence to the affected communities. There are very significant economic, nutritional, and cultural benefits of subsistence. If you examined the benefits to Angoon, Tenakee or Sitka from subsistence, the Forest Service would find a substantial net gain to these communities because of the subsistence resources hunted, fished or gathered by community residents. In addition, as a 9th Circuit Court of Appeals panel determined in July of 1991, "customary trade" is a subsistence use and could include sales for cash if the trade is conducted in a manner consistent with a subsistence lifestyle. The DEIS fails to analyze the extent of customary trade in the affected communities or impacts from this project on activities falling within the scope of customary trade. Of particular concern are the impacts from proposed log transfer facilities on safe boat anchorages and the health of delicate estuarine ecosystems.

V-E5 Finally, we must address the comment in the DEIS that "[c]ommunity stability is a very important consideration in planning for timber harvest activities on the Tongass." Community stability is not a "multiple use" recognized by the NFMA, the Resources Planning Act of 1974, or the Multiple Use-Sustained Yield Act. Furthermore, the Forest Service apparently lacks the critical information to adequately compare the short-term benefits to a single industry from cutting at least a 108 mmbf from this project area, and the longer-term benefits to the recreation, fishing, tourism, and subsistence economies from leaving every tree standing. Unless the Forest Service has the information to conduct an informed and objective analysis, it should keep its self-serving rhetoric to itself.

8. Wildlife Retention

The ability of the Tongass to maintain numbers and diversity of wildlife is dependent on maintaining an adequate amount of large blocks of unfragmented high volume old-growth timber. We are pleased that the planning team recognized the importance of Habitat Conservation Areas. However, it would have been more helpful if the Forest Service had disclosed and discussed the basis for the tracts of land shaded in on the map in Figure 4-2. The Forest Service should also compare attributes of the areas chosen with the criteria proposed by the Interagency Committee in its March 1992 Report. Furthermore, the shaded portions appear to include areas which have been heavily clearcut.

TIMP provided for permanent wildlife habitat retention areas. While the paragraph on Habitat Conservation Areas (4-106) and Figure 4-2 meet some of the requirements contained in the 1985-86 TIMP Amendment, the DEIS fails to conduct a complete analysis and identification of the important blocks and corridors around which the alternatives were designed. For example, while the DEIS does contain the location of the retention areas and acreage in Figure

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V-B The operations of the Sitka pulp mill and Wrangell saw mill are also closely connected actions to this proposed timber sale. This timber sale is offered to "make timber available in accordance with [the APC Long-Term Timber Sale Contract]." DEIS, at 1-1. As required by Section 80.52 and 80.53 of that contract, APC must process a minimum amount of timber cut from the contract area at the Sitka pulp mill. Thus, operation of APC's Sitka pulp mill is within the scope of the Southeast Chichagof project, and the direct and indirect impacts to the "human environment" from operation of the mill must be addressed by the agency. Air and water pollution, plus waste disposal, arising from operation of the APC pulp mill and Wrangell sawmill is a cost of this proposed project.

V-B On page 12 of the Summary, the Forest Service states that "[n]one of the alternatives is expected to have a significant impact on commercial fishing, recreation, and tourism industry, or related employment." How big an impact is significant? How many jobs will be lost because of this cutting plan? How much income will be lost? The lack of information presented in the DEIS regarding employment and income effects for these industries leads us to question what relevant information supports the agency's conclusions. How can the Forest Service take a hard look at the social and economic impacts from these proposed alternatives without this information? Is collection of this information exorbitantly expensive? See 40 C.F.R. 1502.22.

V-B Recreational guiding, as well as bear hunting and viewing employees people in Angoon, Sitka and Tenakee. Logging, roading and increased competition for resources has a negative impact on these industries. There is a substantial body of testimony from the recreation industry supporting this conclusion. The DEIS ignores the importance to Tenakee Springs of non-subsistence deer hunting. Visiting sport hunters rent cabins, buy food and supplies, and obtain services locally. Habitat losses that result in restrictions on sport hunters will harm Tenakee's economy by eliminating that income. This economic impact is not considered. Tenakee is also a very popular vacation destination for both Alaskans and sightseers from all over the world. An increasing percentage of the local economy is based on tourism yet the Forest Service failed to disclose the data used to support its claim of no significant impact. Although the DEIS presents graphs detailing employment and income effects for the timber industry, no graphs or charts can be found showing the earnings associated with each sightseer, photographer, hunter or fisherman that travels to Tenakee Inlet. This information is critical to a reasoned choice among the alternatives, and since the DEIS does not claim that the cost of obtaining the information is exorbitant, it must be included in the DEIS. See 40 C.F.R. 1502.22(a).

The DEIS also fails to consider the economic benefits of

SEACC COMMENTS ON DEIS FOR
SOUTHEAST CHICHAGOF TIMBER SALE 15

Southeast Alaska Conservation Council

4-2, it fails to describe the wildlife species to be featured in the retention area, break down the acreage by timber volume class, specify a retention prescription, or describe the habitat values to be maintained or enhanced by such management. See Appendix D of the 1995-86 TIMP Amendment at D-4. Furthermore, the DEIS should provide a current accounting of "retention areas" already specified in previous planning efforts within the project area.

SECTION 810 COMMENTS

As noted at the beginning, the Forest Service's description and analysis of impacts is much better than previous efforts. Nonetheless, the basic contradiction in agency subsistence policy has not been resolved. The language of the TTRA and Section 810 of ANILCA clearly direct management of the Tongass away from the single-minded emphasis on timber production. But when it comes down to making management decisions, the Forest Service still gives logging under the long-term contracts the highest priority.

Several data problems are apparent. As Molly Kemp, from Tenakee Springs, explained in her written subsistence testimony (dated May 30, 1992) the maps and charts derived from the TRUCS survey have some glaring inaccuracies. Her testimony is attached to these comments and incorporated herein. Angoon has stated that their deer harvest has been significantly under reported in the DEIS. Angoon has stated that for the hunting season of 1991, deer harvest was low due to fewer deer being available. Their subsistence needs were not met. As Loyal J. Johnson's April 4, 1991 letter to you makes clear, Broad Creek and Broad Finger Creek are extremely important areas for subsistence deer hunters from Sitka.⁵ Additional logging, road building, and competition in their subsistence areas will not increase available deer numbers. In order to cause the least impact possible to subsistence uses, the Forest Service must design alternatives which avoid high-use subsistence areas.

Despite obvious problems with affected rural residents' ability to provide for their current subsistence needs, the Forest Service's solution is to restrict sport hunting and dislocate subsistence uses from customary and traditional use areas within the project area. This is not acceptable. The fact that "there is a significant possibility of a significant restriction of subsistence use of deer in the Project area ... regardless of which alternative is implemented" demonstrates the narrowness of the range of alternatives considered. The Forest Service should have, and must in the SUPPLEMENTAL DEIS, consider alternatives which

⁵ This letter, as well as Mr. Johnson's May 24, 1991 letter to Michael Barton should be incorporated into this sale's planning record.

SEACC COMMENTS ON DEIS FOR
SOUTHEAST CHICHAGOF TIMBER SALE 17

X-A

reduce the volume owed under the APC long-term contract, cancel the contract, or withdraw this project area from the contract area.

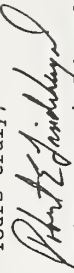
Congress specifically requested the Forest Service to analyze whether it could meet all of its legal responsibilities on the Tongass while providing the volume of timber required by the revised long-term contracts. Instead, the Forest Service analyzed the effects on the supply of timber to the pulp mills if it complied with the laws governing forest management on the Tongass. Thus, the Irland Group Report is inadequate because it is only a "timber supply study." As each of the draft and final EISs issued since the passage of the TTRA show, the Forest Service can not meet the requirements of the APC long-term contract and assure that approved APC timber sales cause the least adverse impact possible on subsistence uses.

CLEAN WATER ACT

Last but not least, we must incorporate statements previously made by SEACC regarding the quality of the information relied upon, as well as the complete lack of BMP effectiveness monitoring data, to refute the agency's claims that this project will satisfy Alaska state water quality standards. Furthermore, we believe that this DEIS fails to demonstrate in advance that timber harvest and road construction will not cause beneficial use impairment and cause state water quality standard exceedances. To further achieve the goals of the Clean Water Act to restore and maintain the chemical, physical, and biological integrity of the nation's waters, the Forest Service must perform an antidegradation analysis, as specified at 40 C.F.R. 131.12. This analysis, as well as identifying a strategy to integrate the Section 319 program into this action, must be included in the SUPPLEMENTAL DEIS.

Thank you for considering these comments.

Yours truly,


Robert E. Lindekugel
Staff Attorney

SEACC COMMENTS ON DEIS FOR
SOUTHEAST CHICHAGOF TIMBER SALE 18

X-D

X-B

X-A



UNIVERSITY OF OREGON

Becky Night
Narrowes Conservation Alliance
P.O. Box 1331
Petersburg, AK 99833

May 6, 1992

Dear Ms. Night,

I am writing you about my concern over the adequacy of archaeological survey conducted in preparation for the Bohemia Timber Sale. K.J. Metcalf recently brought the issue to my attention and provided me with a project description and relevant topographic maps.

I understand that a road is planned from the Bohemian Range through the low-lying areas of sections 21 and 22 (T. 57 S. R. 77 E.) south of the head of Portage Bay. This road will have to cross four streams (one is a tributary) that empty into Portage Bay. I understand that some cutting units are planned in this area as well. I have been told that archaeological survey has been limited to the current shoreline, but I have not evaluated the archaeological survey reports myself. For this reason, I cannot assess the archaeological work that has been done, but can point out some problems if such work has been limited to the contemporary shoreline.

Although most of the known archaeological sites in southeast Alaska are located along current shorelines, this is largely a product of survey bias. In other words, archaeologists have focused on shoreline surveys and this is where we have found sites (a self-fulfilling prophecy, so to speak). Areas away from the coast are harder to survey, forest vegetation limits subsurface visibility, and paleoenvironmental changes (like isostatic rebound and eustatic sea level changes) affect different areas in different ways. Despite these difficulties, however, the topography of the project area is such that I strongly recommend archaeological survey of some areas away from the coast.

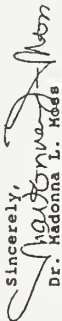
In 1985, Robert Ackerman and his co-workers published a report of their survey of timber harvest units on Heceta Island, Ketchikan Area (Ackerman et al. 1985). The investigators systematically surveyed harvest units that were located in interior settings. They made a number of significant discoveries of sites located away from contemporary shorelines. This is because in the past, with higher relative sea levels, such sites were located closer to the coastline, and they have since been uplifted. Some of the settings in which they found "interior" sites are quite comparable to the geomorphological setting of the Bohemia project area. In

particular they found two sites on benches above Rice Creek, one site, 49-CRG-235 extends to a 25 ft. asl (above sea level) bench over .5 mi. from saltwater, the other site, 49-CRG-234 is located on a 42-56 ft. asl terrace over .75 mi. from the current shoreline. These two sites consist of artifact scatters that have not yet been dated or further investigated.

Even more significant was discovery of 49-CRG-237, the Chuck Lake site located in the low-lying area between Chuck Lake and Warm Chuck Inlet. This site actually consists of six different localities where artifacts and features were discovered. Locality 1 is a shell midden, located at 49-59 ft. asl located over .5 mile from saltwater. It has been dated to 8200 years old and is the oldest known shell midden from the entire Northwest Coast (from Yakutat to coastal Washington). At the time it was occupied, what is now Chuck Lake may have been the upper end of an embayment that was continuous with Warm Chuck Inlet. Localities 2 (43-49 ft. asl) and 3 (39-53 ft. asl) date to c. 5000 years ago; after sea level dropped, people adjusted the locations of their settlements accordingly. This is a good illustration of how the landscape has changed over the last 10,000 years, and how we archaeologists must tailor our survey strategies to find the ancient sites.

I think there are important parallels between the Heceta Island case and that of the Bohemia project area. Some of the low-lying area southwest of the head of Portage Bay may have been flooded, possibly connecting with Salt Chuck that leads into Duncan Canal. Early sites might be found on landforms that would have risen above such an embayment, which would gradually be transformed into the landscape of today with uplift. We might expect sites from a variety of time periods to be represented in this area, considering the strategic connection between Frederick Sound and Duncan Canal.

Because of the high potential for identifying older sites, I think that selected areas of the Bohemia Timber Sale deserve intensive archaeological survey. I would recommend that the Forest Service sponsor such work. I hope you find my assessment of the archaeological potential of the Bohemia project area useful.

Sincerely,

Dr. Madonna L. Hoda
Assistant Professor

References Cited

Ackerman, R.E., K. C. Reid, J.D. Gallison, and M.E. Roe
1985 Archaeology of Heceta Island: A Survey of 16 Timber Harvest Units in the Tongass National Forest, Southeastern Alaska. Center for Northwest Anthropology, Project Report No. 5, Washington State University, Pullman.

City and Borough of Sitka



City and Borough of Sitka

304 LAKE STREET, SITKA, ALASKA 99835

June 15, 1992

Mr. Gordon Anderson, Team Leader
Southeast Chichagof Project Planning Team
U.S. Forest Service, Tongass NF, Chatham Area
204 Siginaka Way
Sitka, AK 99835

RE: Southeast Chichagof Draft Environmental Impact Statement (DEIS)

Dear Mr. Anderson:

The Sitka District Coastal Management Program has reviewed the Draft EIS for the Southeast Chichagof APC Long-Term Timber Sale Contract. The Sitka District Coastal Management Program goal is "to achieve wise use of the land and water resources of the coastal area and to balance economic growth with ecological and cultural values for the beneficial use and enjoyment of present and future generations." The Program places emphasis on preserving, strengthening, and diversifying the economic base of the Sitka community, and also "to protect and maintain existing outdoor recreational opportunities within the city and Borough of Sitka." The Project Area falls within the Sitka Coastal District.

The Sitka Coastal Program Public Use Management Plan, a significant amendment to the revised Sitka Coastal Management Program, has received Concept Approval from the Municipality and will be presented to the Alaska Coastal Policy Council for approval. The Coastal Management Citizens Committee, which identified the Special Management Areas contained in the Public Use Plan, chose three sites within the Project Area as Special Management Areas. Kadashan Bay, as LUD II, is not proposed for logging. Sitkoh Lake Cabins, Trail, Stream and Bay, as well as Kook Lake Cabin, Trail, and Basket Bay, are in the Project Area. While the Public Use Management Plan has not received State and Federal approval, it is likely it will be adopted as a significant amendment of the Sitka Coastal District Program.

Both these lake and stream systems are sockeye salmon streams, and the Plan seeks to provide high level of protection for the sockeye resources, as well as the recreational, personal use and subsistence uses of these Special Management Areas. It does not appear that the Sitkoh system will be impacted by any of the Alternatives. However, Kook Lake and Basket Bay in VCU 239, will be logged under Alternatives C, D, E, and F. Of these alternatives, Alternative C has the most cutting scheduled around both the north and south sides of Kook Lake; and Alternative D, with no cutting around the lake area, has the least. Both Alternatives E and F show cutting areas north of the Lake but not to the south. None of the harvest proposals are located within

Mr. Gordon Anderson
June 15, 1992
Page 2

the Special Management Area, but they would have impacts on the watershed. As long as water quality and temperature will be unchanged by the cutting activities, D, E, or F will all be acceptable, but Alternative C has a very high level of cutting activity in this Area.

Alternative E appears to provide the most attention to keeping harvest areas away from salmon streams, lakes, salt water, and riparian areas, and concentrating activities in higher elevations and upper valleys, to reduce the effects on the water, fisheries, recreation, and subsistence resources within the Project Area. It appears to achieve the harvest volume goals while minimizing conflicts and habitat loss close to salt water and lakes. In terms of visual impacts, Alternative F would probably provide limited impacts while still providing adequate harvest, since the timber harvest and road building is concentrated, away from salt water and lakes.

While each alternative has "trade-offs", there is nothing in Preferred Alternative E with which the Coastal District has major concerns. It appears to have less potential for habitat loss close to the coast, as well as less impacts on areas of importance to the residents of Tenakee, than some other alternatives. The Coastal District therefore has no objections to Preferred Alternative E.

Please contact me at 747-5500 if any further information is needed. Thank you for the opportunity to comment.

Sincerely,

Marlefe A. Campbell
Marlefe A. Campbell
Coastal Coordinator

cc: Division of Governmental Coordination

SITKA CONSERVATION SOCIETY
Box 316 Sitka, Ak 99835

June 29, 1992

Gordon Anderson, Team Leader
USDA Forest Service
Chatham Area
204 Siginaka Way
Sitka, Ak 99835

Hand delivered

a review and the preparation of comments impossible. It should be noted that SCS has been very active on forest issues since 1968, and that Kelp Bay is an area of high importance both to our members and to the community of Sitka as a whole. A battle over a development in Kelp Bay was hard fought by a large body of people from Sitka and Angoon a few years ago, and was won. This is not a place on which the people of these communities would willingly turn their backs. The silence was defining on the Kelp Bay plan only because the timing of its review was absolutely inappropriate. It angers us to see such timing propagating as a trend in forest planning throughout the Tongass.

We have made an effort to review the SE Chichagof DEIS, but our review has of necessity been more hasty and incomplete than we would like. While our reviewers have invested substantial time in evaluating the DEIS, far more time was needed but was unavailable because of the season. The work which went into our comments was overly burdensome and stressful due to the demands of the season. We remind you that we are a strictly volunteer organization with no paid staff.

We have been unable to confer with interested individuals and organizations in Tenakee Springs and Angoon because of conflicting seasonal schedules of the individuals involved. It saddens us that this is the case because the affected communities may have conflicting interests relative to this plan, as driven by the impetus of the Forest Service to "get the cut out". Since a decision which is favorable to the conservation and subsistence interests of one community may be detrimental to those of the others, we consider such conferring to be an essential task.

We therefore ask that the review period be extended until the end of October, unless a Supplemental DEIS is prepared, as requested in our attached comments. This extension will allow people to "come down" from their summer activities or return from their travels, and to put adequate time into reviewing the DEIS. It will also provide individuals and organizations in the various communities a fair opportunity to confer. Since the subsistence suit injunction has been lifted, we feel that the amount of breathing room requested is reasonable. Too much is at stake here for public comment to be stifled.

Sincerely yours,

Page Else
President

(unavailable)

Bill Brooks
Issues Committee Chair



IV-E

The purpose of this letter is to put special emphasis on the public process used to date for this plan. Simply put, we reject the period chosen for its public review are, at best, callously insensitive to the inflexibility of seasonal employment and activities of a majority of the affected public. This is the time of year when those who use and depend the most upon non-timber resources of the Tongass National Forest are fully absorbed in subsistence activities, commercial fishing, charter boat operation, and other seasonal endeavors. This is by far the busiest time of year for many residents of this region.

At worst, the timing of the public release and comment period may have been coldly calculated to prevent this large body of the affected public from making substantive comment. We are of the opinion that this is the case. The timing of this DEIS is but the latest example in a long train of identical abuses.

The Kelp Bay plan was out for review at a bad time last summer, and this year we have two plans out at once at a bad time, Southeast Chichagof and the North & East Kuiu DEISs. In addition, the Ushk Bay scoping hearings were held less than a week before the scheduled close of comments on the SE Chichagof Plan -- a time when people who can spare some time should have been home reviewing the later document. Continuing the trend, release of the Central Prince of Wales Plan is planned for this August. We can only conclude that this series of poorly timed events is intentional rather than accidental. We believe that the Forest Service is attempting to manipulate the public process to achieve its own ends. We object!

As a case in point, the Kelp Bay plan deserves special mention. It was released last summer and received only 23 comments, including those from government agencies. Sitka Conservation Society (SCS) did not comment simply because the poor timing of the review period made

Sitka Conservation Society

SITKA CONSERVATION SOCIETY
Box: 316 Sitka, AK 99835

June 29, 1992

COMMENTS ON THE SOUTHEAST CHICHAGOF
DRAFT ENVIRONMENTAL IMPACT STATEMENT

GLARING PROBLEMS WITH THE EIS.

In the cover letter for these comments we asked that the period for public comment be extended at least until the end of October to allow the public the opportunity it deserves to prepare and submit substantive comments to this important plan. That request was based entirely on short comings in the public process surrounding this plan.

In contrast, these comments are based on an analysis of the content and adequacy of the plan itself which leads us to make a second and more important request. It is prompted by problems with the DEIS which can only be described as glaring and which must be corrected before the FEIS is issued. We request that a major supplement to the DEIS be issued. We hope that it can be completed in time to allow completion of public review before the herring spawn next spring; that is in time for the public to review it during an appropriate, less busy season of the year.

We now turn to a discussion of the serious problems we have alluded to. Each of these is a violation of the requirement of TTRA 301(c)(1), in addition to other law or regulations. Relevant citations to laws and regulations are attached in Appendix A of our comments.

- 1) The DEIS Fails to Adequately Incorporate Field Reconnaissance and the Interdisciplinary Approach, and is a Paper Exercise.

Standards for the adequacy of environmental analysis at Gate 2, which is where we are now, are established by the CEQ regulations and the Forest Service Handbook. They spell out a planning process and a document which is very different than the one we are commenting on. A systematic, integrated, interdisciplinary effort based on "intensive" field reconnaissance is required. "Paper design" is to be avoided and field reconnaissance emphasized. Site specific information and the location of key resource values with special management requirements is also required.

SCS Comments -- SE Chichagof DEIS
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Page 2.

At the feet of these standards which are intended to ensure that our society engages in "wise use" of its resources, this DEIS falls flat.

While Silviculture and Timber specialists did field reviews of 66% and 76% (respectively) of the 172 potential cutting units, specialists for other disciplines had a very slight field presence. The numbers of units visited by an appropriate specialist were (by discipline): Soils 16%, Wildlife 50%, Hydrology 0.5%, and Fisheries zero. This indicates a non-systematic, non-integrated, non-interdisciplinary approach at a Gate in the planning process where field reconnaissance is supposed to be emphasized, and where full involvement of and cooperation between all disciplines is essential.

To the contrary, comments were entered on unit cards without the benefit of a field inspection for 54% of the units by Soils and 11% by Hydrology. No comment was offered at all by Soils for 30% of the units, by Fisheries (by a proper specialist) for 100%, by Hydrology for 89%, and by Wildlife for 47%. [See the table in Appendix-B.]

These figures are significant. Even if remedial field work is being done during the current field season (we do not know if it is), such field work is of no value to the public which is reviewing the DEIS now, and its inclusion in the FEIS would not in any way remedy its absence in the DEIS and in the critical Gate 2 planning process. Regarding potential impacts on non-timber resources, this DEIS is in fact strictly a "paper exercise".

We note further that the comments made regarding wildlife on the unit cards were just that, no more than comments. Observations should be backed up on the cards by recommendations. As a common example, the wildlife biologist's comment for one unit was, "High quality ... brown bear and martin habitat is located throughout the unit and outside of the unit ... [VCU 246, Unit Card 3570.] That may be an important observation, but what should be done about it in the planning, implementation or monitoring processes? A recommendation or suggestion is needed. There were similar problems with statements made for other specialties.

On none of the road cards is any recommendation or requirement made regarding how Class 1 and 2 streams or the buffers beside these streams should be crossed. This is a prime example of a need for interdisciplinary teamwork, but without fisheries, soils and hydrology specialists active in the field, the work cannot be done correctly (even if it were to be attempted by other team members).

While we are pleased to see that planned buffers are in many cases wider than the minimum 100 feet (Table 4-52), there is no evidence from the unit cards that any field work was done in determining the widths. Further, the ranges given in Table 4-52 for the width of many of these buffers is extreme; for example 100'-700' for unit 3790 and 100'-1,100' for unit 2440. These are not

isolated instances. The prevalence of wide ranges of buffer widths are clear indication that the level of detail required for Gate 2 planning has not been satisfied. Just in terms of timber volume alone, the variation within these ranges for each unit and each VCU must be considerable. Also, no widths or even a characterization of widths for any buffer strips are shown on any of the unit cards.

We also note that on a number of unit cards entries for particular specialties were made by a specialist from the wrong discipline. All comments made in the fisheries boxes (on 13 unit cards, and these were the only unit cards which had any comments for fisheries) were for example made either by timber or hydrology specialists. We consider this improper, and again the lack of systematic, integrated, interdisciplinary effort is obvious.

The lack of field review for fisheries is particularly appalling. Last fall in the Stoney Creek area (Prince of Wales Island) two anadromous streams were logged to their banks and covered over with debris because of similar lack of field review or field review by inappropriate specialists during the Gate 2 planning process. Planning which does not involve thorough field review during Gate 2 and which is not a truly systematic interdisciplinary effort from start to finish is unacceptable.

"High" or "extreme" mass wasting risks and high or extreme soil instability are mentioned on many of the unit cards and road cards, often in units for which there has been no field reconnaissance. We note from the information pages 3-25 and 26, that 87% of past landslides in the project area have been caused by logging activities and roads. The field work & card comments expressed in the DEIS (and the monitoring program) are not adequate to deal with the potential problems.

The glaring lack of adequate field reconnaissance, apart from being improper planning, casts a dark shadow over all estimates of impacts on fish and wildlife and other forest values made throughout the DEIS. This is particularly true where known inaccuracies or lack of resolution in the timber type database or other resource databases come into play.

2) A Reasonable Range of Alternatives Has Not Been Considered.

Substantial conflicts over logging on the Tongass remain despite passage of TTRA due to the sheer magnitude of timber committed by the long term contracts in relation to the resource base and the lifestyles of many Southeast Alaskans and their close attachment to the environment of their region. Despite these unresolved conflicts over resource use, the Forest Service is issuing environmental impact statements with a sharply limited range of action alternatives. All appropriate alternatives are not being prepared and considered, only those which favor high timber yields.

1A

We reject absolutely the validity of any planning which is done in this manner. While it is appropriate for this DEIS to tier to TUMP, TUMP may reasonably only suggest the amount of timber which might be sought from certain broad areas. TUMP is not sufficiently detailed to conclude that a particular area is in fact capable of safely producing a certain yield of timber. Planning on that level of detail is properly the realm only of lower level documents such as this DEIS.

In sharp contrast however, the DEIS reflects a decision which has already been made, without appropriate NEPA review, that the SE Chichagof area will yield at least 108 mmbf. (We believe that neither of the no-action alternatives stand a snow ball's chance in Hell of being adopted by your agency, and we will be willing to discuss our rationale on that at a later date if you wish.) It seems that the figure of 108 million (or more) was picked to satisfy the APC contract for a given period of time from the given SE Chichagof landbase; an arbitrary and capricious decision in terms of potential impacts to other resources.

In this DEIS and the current Kuiu Island DEIS, and also in the planned alternatives for the upcoming Central Prince of Wales DEIS (CPOW), the ranges of alternatives are nearly identical at about plus or minus 12% from the median timber yield of the alternatives in a given DEIS. All three plans do (or in the case of CPOW will) include only a very narrow range of action alternatives, all with high timber yields. We contend that a much wider range of alternatives should have been -- and should still be -- considered in light of unresolved resource conflicts in each of these plans. It is required that all reasonable alternatives be rigorously explored [CEQ Regs 1502.14], but they have not been.

Finally, we find the discussion of the included alternatives to be practically worthless.

Again, please see citations to law and regulations in the Appendix.

1A-D

3) TTRA Buffer Zones Are Not Adequately Implemented.

Once the cutting and roading is done, there is nothing which can be done to "maintain" a buffer strip. Buffers are for the most part old growth, and once there is blow down or rechannelization of the stream, it is impossible to recreate what was lost. The required "maintenance" of the minimum width (or a wider prescribed width) can be provided only by making the buffer adequately wide in the beginning, to account for future losses which may occur to parts of the buffer.

Sitka Conservation Society

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Page 6.

V-D

XII-C1
IV-C

Nowhere in the comments or on any of the unit cards or road cards is any mention made of streamside buffers or how or where roads which must cross them should do so. Buffers are mapped on the cards, but their widths are never specified, and scale of the maps varies significantly from one map to another making even an estimate of width difficult.

Proper planning would dictate that buffer needs be well studied in the field for each segment of each stream adjacent to logging units or roads to determine what width affords adequate protection. Windfirmness must be assured, and possible stream channel changes must be accounted for. We believe proper prescription of buffers requires well integrated work by a soil scientist, a hydrologist, a fisheries biologist, and either a silviculturist or timber expert. This level of interdisciplinary work has not been done in preparing the DEIS.

The proposed monitoring of buffers is abysmal (pages 2-49, 2-50 and 2-55). The plan is to spot check only 20% of the units, and we consider this to be inadequate. All buffers should be checked for proper initial implementation. All buffers in or adjacent to areas with moderate or higher erosion or mass wasting potential should be monitored on a regular schedule into the future, and it might be adequate to monitor 20% of buffers in less hazardous areas.

The proposed monitoring on page 2-55 (Stream Buffers For Windfirmness) is particularly troublesome. In the case of buffers which are the minimum 100 feet wide, apparently a 90 foot buffer is considered acceptable under the criteria presented. This does not satisfy the law however. A minimum width of 100 feet must be maintained, and the threshold should be not be less than 100 feet or other greater prescribed width. The compensation for lack of windfirmness should be to make the strip wider than the prescription initially, and any failure to maintain the prescription should be the threshold.

4) Timber Continues to be Given Preferential Treatment Despite Enactment of TTRA.

The Tongass Reform Act made significant changes in the way the Tongass is supposed to be managed, many of which are presently being side stepped by the Forest Service. Congress also expressed in the language of the act an interest in making further reforms, as can be seen from the nature of the reports required of the Secretary of Agriculture in Section 301(e). Mr. Miller's statement on the House floor at time of passage that "the era for the preferential treatment for a single commodity, timber, is over", provides a further expression of the intent of Congress. Public views are evolving on how and for what purpose the Tongass should be managed, and the Forest Service is expected by Congress to be responsive to those

changes. In particular, timber must no longer be given special treatment.

We find however on page 1-1 that "the purpose of (this) project is to make timber available" for the APC contract. While the Forest Service does have a contractual obligation to provide a certain volume of timber, this need not and should not interfere with conducting planning which gives equal weight to all resources. The single purpose stated for this plan gives the plan a strong bias, and it shows throughout the plan. It is further stated on page 1-1 that "actions analyzed .. are designed to implement direction contained in the TLMP." The DEIS should have provided a clear and succinct revelation of what the TLMP direction and the actions are and how they were analyzed.

Getting back to the "purpose" of this plan, we contend that the long term contracts must not be considered sacrosanct by your agency. TTRA section 301(e) shows Congress' interest in whether timber volumes required by the contracts can be provided while meeting the requirements of certain laws that protect natural resources from unreasonable harm during development. While it is unknown what action Congress might take if there is a conflict between the laws and the contracts, the past willingness of the House to terminate the contracts, and the subsequent willingness of both the House and Senate to unilaterally modify them, are clear indications that protection and wise use of natural resources takes precedence over mere contracts.

It seems however that the Forest Service has missed the messages of Section 301(e) and Mr. Miller entirely. The DEIS reflects that timber is still treated as king on the Chatham Area, if not the whole Tongass. Timber and Silviculture have adequate funding to support substantial field work, while other specialties are significantly or totally crippled by lack of funds and manpower. The alternatives in the DEIS consider only high timber yields (relative to the land area), while the concerns of a substantial number of Southeast Alaska residents that logging of this intensity is unacceptable and highly objectionable are not represented in alternatives.

Alternatives which offer smaller timber yields must also be considered, and could stipulate either obtaining the needed remainder from elsewhere in the contract area or reporting to Congress that the contract area needs to be expanded or that the contract need to be otherwise modified or terminated. The era for preferential treatment of timber has, after all, been declared to be over.

5) Proportionality Requirements of TTRA are Not Being Followed.

Available timber type data is known to be highly inaccurate. The only way to assure that the proportionality requirement of TTRA will be satisfied is to conduct detailed on-the-ground cruises both

XII-D

XI-D

of potential cutting units under consideration and of the planning area as a whole. The unit cards reveal that even in just the cutting units this work has not been done. On none of the unit cards is there any comment on the state or volume class of timber the unit actually contains. It is shocking that this essential information is missing.

The DEIS states at 4-23, "However, the proportionality required of TTRA is specific to volume harvested, not volume planned or scheduled for harvest. The final determination of proportionality will be made based on the actual location of the designated harvest units." This may be true in the strict sense, but unless cutting which satisfies the proportionality requirement is carefully planned for, the requirement is unlikely to be satisfied in practice. Detailed planning based on a detailed field inventory is necessary at Gate 2. Conversely, implementation of even the best of planning must be monitored to determine how well the proportionality requirement is satisfied in practice.

Our interpretation of the DEIS is that it improperly deals with the proportionality issue by, from a practical standpoint, ignoring it. This must be rectified in a supplemental DEIS and be supported by accurate field work.

We also note that in discussing proportionality the DEIS lumps volume classes 6 and 7 together. This is absolutely improper. The two classes are separate and distinct from one another, are treated as such in TTRA, and should always be treated as such by the Forest Service. To imply as the Forest Service does that it is OK with Congress to continue high grading volume class 7 timber to whatever extent can be done by lumping classes 6 and 7 together, stretches credibility and both the spirit and letter of TTRA beyond their outer limits.

Further, we note the extreme rarity of volume class 7 timber in the planning area, and request that no timber from this volume class be cut at all.

Tables in the DEIS such as 2-46 are bogus since they list only "old growth", ignoring entirely the several volume classes and the different quality and value of habitat each class embodies.

The DEIS neither makes a clear presentation of the impact of the various alternatives on habitat, nor does it provide assurance that the practice of disproportionate harvest of the highest classes of old growth will be ended.

XI-D

6) The Proposed Monitoring Is Generally Inadequate.

There is a recurring theme in the proposed monitoring for various elements of the plan. As an example, we cite here "Timber Unit Yarding" on page 2-47. Only one cutting unit in five with high-hazard soils would be "spct checked" for compliance with Best Management Practices (BMPs). Even if violation of BMPs is observed, no action would be taken unless more than 10% of the area has been impacted to the point of having bare mineral soil. We emphasize that this monitoring activity is specific only to areas with "high-hazard soils", and consider this level of monitoring and enforcement to be paltry and inadequate.

Throughout all activities under and implementation of this plan we ask that there be close monitoring and that no "thresholds" be applied for compliance with law, regulation, BMPs, or any other element. The monitoring program should be of sufficient scope to detect any non-compliance, and when such is discovered immediate action should be taken to assure that it does not continue and that remedial measures are taken as appropriate.

After activity by the contract holder under this plan is finished, monitoring of buffer strips, high hazard soils areas and other potential problem areas should be monitored on a comprehensive and regular basis until such time the potential for problems is determined to be negligible. There is sufficient variability between units and the weather they are exposed to that sampling only 20% of them is not adequate.

Activities and implementation, and the long term results of same, should be monitored comprehensively or not be undertaken in the first place.

6) The "Forestry" Leaves Much To Be Desired.

As we have often commented in the past, we strongly object to the Forest Service considering clearcuts to no longer be openings after the regrowth is five feet tall. This approach considers timber only as a crop, and totally ignores its other multiple values and the fact that it is part of an ecosystem which is being heavily impacted. Only biological and habitat considerations should be applied when determining when clearcuts are no longer clearcuts. Time, on the order of 200-300 years, and condition of the regenerating habitat should be the primary element, not an insignificant and arbitrarily (from an ecological viewpoint) specified height of the regrowth.

We therefore ask that significant leave strips be provided between clearcuts, or in other words that the practice of butting new units up against "young growth" not be done under this plan. Otherwise clearcuts which vastly exceed the normally allowable 100 acres will in fact have been created.

XII-C1

Several new cuts would by themselves exceed 100 acres. While a table is presented which gives a highly generalized reason for allowing each exceedence, we find that no justification, rationale or analysis of the need to exceed 100 acres is in fact presented.

Its announcement came too late for incorporation in the DEIS, but we ask for a thorough discussion and consideration of the Forest Service's new policy to significantly reduce the practice of clear cutting. We believe that this new policy is by itself ample reason to prepare a supplement to the DEIS.

7) Subsistence, Fish, Wildlife and Habitat.

In consideration of the inadequate field reconnaissance, the estimates of impacts of the project on subsistence in particular, and on fish and wildlife more generally, cannot be substantiated. In light of the shortfall of existing subsistence capability in the area, which the DEIS admits, the NEPA analysis is incomplete and puts a resource use (subsistence) which has specific protections at risk.

The maps of the alternatives show areas to be managed for old growth habitat in purple. We note that two of these are along the critical beach fringe in VCU 246, that they are relatively narrow, and that they are traversed by new roads along their lengths. Also, several other important beach fringe areas in 246 are left as white, including the area of and near the spit at the mouth of Broad Creek. All of the coastline in 245 and 246 which has not been logged should be designated for old growth management. This stretch of coast is where brown bears first appear in spring in this area, and must therefore be assumed to be important. Also, roads around major points (such as the one linking VCUS 231 and 232) have got to have a major impact on deer, and this should be analysed.

The brown creeper has already been very hard hit by logging in the project area, and we are concerned not only that its numbers in the project area will be further diminished but that we have no confidence in the modelling which has been done. The analysis of impacts on this and other species should have included a statement (numerical) of the degree of confidence which can reasonably be attributed to the estimated impacts, considering the quality and completeness of relevant inventory databases and the amount of field verification which has been done in the project area for the inventories and models.

8) Some Elements Of The Plan Have No Justification, Analysis Or Alternatives.

There are some elements of the plan and DEIS for which no justification, analysis or alternatives are presented. It appears to us that this has happened because the stated purpose of the Southeast

Chichagof Project is to provide timber, resulting in only trivial consideration for elements of the project which do not contribute to timber production.

As an example we cite the fishery enhancement projects. These are projects to which we do not necessarily object and which in some cases we may wish to encourage, if they were presented in the manner required for NEPA documents. These projects appear to have been simply thrown into the plan. No rationale, justification or analysis is given them, nor were any alternatives presented. In the absence of the above, we must question whether these projects are really the best ones on which to expend limited funds, and whether they are good biology and good for the fishery in the long run.

GENERAL COMMENTS ON FORM OF THE DEIS

We have found the index of the DEIS to be very poorly done. It lacks listings for many important items, and for those listings which it does have it leaves out many important references. An example of an important omission is Table 4-52 and the mention of buffers on page 4-67, which should have been listed under "Stream buffer zone (buffer zone)". In addition, it would have been good to have a "Buffer zone" entry in the index that refers to the existing stream buffer listing. This is but one example.

Additionally, some index entries are unduly long. For a few examples, "Road", "Subsistence Use", and "Timber" should be broken down into a number of well titled and managably sized subheadings, each offering a few citations.

The lack of a good index placed a substantial burden on our reviewers, considering the bulk and complexity of the document and their time constraints (which resulted from the poor timing of the comment period for the DEIS).

In addition we found the DEIS to be far bulkier than it needed to be. It is consequently more intimidating to the public and more wasteful of resources than necessary. Since conciseness and limiting the number of pages in NEPA documents in specifically addressed at several points in the CEQ regulations, several steps should be taken in any supplement to the DEIS and the FEIS. Photographs and clip art should be eliminated except in cases where they are necessary for reference, white space should be reduced (leaving some room for marginal hand-written notes), and generally the most should be made of the space on each page. An example is the tables on pages 3-27 and 3-28 which could all have been fit on one page. Many tables could be more condensed by using smaller print, without sacrificing readability.

CONCLUSION, AND OUR COMMENTS ON THE ALTERNATIVES AND THE PROCESS FROM HERE.

We find the DEIS to be thoroughly inadequate when viewed with the regulatory standards it must satisfy. As stated previously, we request that a major supplement be done and be issued at a time of year when the affected public is best able to give it substantive review. The late end of the period October through March would be the best timing for this plan, allowing time for the work to be done. In the event that a decision is made not to supplement the draft, we ask that the comment period be reopened and extended to the end of October to allow the public a fair opportunity to comment substantively.

We oppose absolutely the road linking VCU 246 and 233. We also oppose any further logging in VCU 246, and certainly that of the scale which is proposed. Road construction along the shore of this VCU should not happen.

If a supplemental DEIS is not prepared, we must ask that one of the No-Action alternatives be selected. We would however welcome instead the opportunity to review a supplement which analyses a full spectrum of alternatives in terms of the timber volume to be cut.

We wish to incorporate by reference several documents as part of our comments:

- a) Appeal #92-13-00-0082 of the Kelp Bay EIS by the Wildlife Society, and the SEACR intervention comments on that appeal.
- b) All comments by SCS, SEACC and the Wildlife Society on the TLMP revision.

-- 30 --

Attachments: Appendices A and B.

A P P E N D I X A

Citations relating to Section-1 of our comments:

1. "... all agencies of the federal government shall: a) "utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and decision making ...". [See NEPA Section 102 and CEQ regulation 40 CFR Ch-V 1501.2.]

2. "ENVIRONMENTAL ANALYSIS. In every case, conduct the environmental analysis so that the sale is based on field reconnaissance, ..." [See Gate 2 requirements in Forest Service Handbook, Section 34. Emphasis added.]

3. "Field Reconnaissance. Conduct adequate field reconnaissance to develop sale designs. Gate 2 is where the most critical decisions are reached and the greatest expense tends to occur. Avoid too much reliance on summarized data and "paper" design. Conduct a much more intensive field reconnaissance than was done for Gate 1. Leave enough flagging, stakes, marks or other tracks in the field so that the selected alternative can be implemented with the least amount of effort and chance for error during the sale plan implementation phase. [See FSH section 31.1. Emphasis added.]

4. "DOCUMENTATION. Include in sale area design documents sufficient site-specific information ... to permit a smooth transition to Gate 3, sale plan implementation. Include such details as ... 7) Locations of key resource values. ... 9) Zones or areas with specific management requirements, constraints, or mitigation requirements." [See FSH 31.2.]

Citations relating to Section-2 of our comments:

1. "Alternatives Including the Proposed Action. This section is the heart of the environmental impact statement. ... In this section agencies shall: (a) rigorously explore all reasonable alternatives. [CEQ Regulations, 40 CFR Ch-V 1502.14. Emphasis added.]

2. "Each agency shall: ... (c) Study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources as provided by section 102(e) of the Act." [40 CFR-V-1501.2. Emphasis added.]

Sitka Conservation Society

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3. "AREA ANALYSIS. In sale area design, consider the development of the entire drainage, the adjacent area, the transportation analysis area, and other logical units, even though a proposed sale may affect only a portion of the area." [See FSH 31.3. Emphasis added.]

Citations relating to Section-3 of our comments:

1. "In order to assure protection of riparian habitat, the Secretary shall maintain a buffer zone of no less than one hundred feet in width on each side" of certain streams. [TTRA Sec 103(a). Emphasis added.]

Citations relating to Section-4 of our comments:

1. "Given the overwhelming sense of Congress that the Forest Service has mismanaged the Tongass, the burden is now on the agency to prove that it can be responsive to the changing public views of how -- and for what purposes -- this forest should be managed. The era for the preferential treatment for a single commodity, timber, is over." [Statement of Rep. George Miller, floor manager of TTRA at the time of its final passage. Cong. Record #149 Part III 10/26/90 H12833. Emphasis added.]

Citations relating to Section-5 of our comments:

1. Congress directed that the contracts be modified to "eliminate the practice of harvesting a disproportionate amount of old-growth timber ...". [TTRA 301(c)(2). See also 301(b).]

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A P P E N D I X B

Table 1. Status of Field Reconnaissance as Compiled from Unit Cards, by Specialty.

All numbers are percentages of the 172 Unit Cards.

Specialty	Field Comment		No Field Comment		No Field Comment		Inappropriate Comment
	Field Comment	No Field Comment	Field Comment	No Field Comment	Field Comment	No Field Comment	
Silvaculture	66%	0	59%	0			
Timber	76	0.5	23.5	0			
Roads	44	3	39	14			
Soils	15	1	54	30			3
Fisheries	0	0	0	100			7.5
Hydrology	0.5	0	10.5	89			2
Wildlife	53	0	0.5	46.5			3.5

Meaning of the column headings:

Field / No Field designates whether or not a field reconnaissance was made.

Comment / No Comment designates whether a comment (other than "no comment") was entered on a unit card.

Inappropriate Commentor designates that a person from the wrong specialty made a comment (such as someone from Timber making a comment in the Fisheries box of the unit card

Steward H. Stephens

City of Tenakee Springs

CITY OF TENAKEE SPRINGS

EDNA PADDOCK
MAYOR

ADMINISTRATION
(907) 736-2221

June 19, 1992

Gordon Anderson
Southeast Chichagof Project Planning Team
USDA Forest Service, Tongass NF, Chatham Area
204 Sigina Way
Sitka, AK 99835

Dear Mr. Anderson:

Attached, and herein, are the City of Tenakee Springs comments on the Southeast Chichagof Draft Environmental Impact Statement. It is our understanding that the comment period has been extended until June 29, 1992 and that these written comments submitted to you will be treated equally with all other comments received, both written and oral public hearing testimony.

The City of Tenakee Springs does not endorse any of the Alternatives in the Southeast Chichagof for the following reasons:

- 1A
1. All the alternatives, except A (No Action) are built around assumption that logging is the highest and best use of the areas.
 2. The socioeconomic effects of present proposals do not consider local impacts, national impacts, and the loss of the resource to future socioeconomic needs.
 3. There are assumptions that there is a need to provide APC beyond contractual obligations and this affects objectivity in evaluating the rate and timing of cutting of specific VCIUs.
 4. The Sale Plan is a "contingency" area and should not be proposed because:
 - A. There are areas already given to APC that remain uncut.
 - B. There are areas in the "contract" area that are not being developed or even proposed for development.
 - C. Use of "contingency" areas are resulting in turning areas into timber-related regions under the guise of contractual needs and thereby side-stepping their proper evaluation under current national laws and according to true multiple use principles.
 - D. Use of 'contingency' areas is allowing a low profile in the contract areas and avoiding confrontation in more populous and friendly communities at the expense of the small population communities in the 'contingency' areas.
 5. Major reductions in deer populations in specific areas are being accepted, without regard to traditional use of the areas.
 6. Losses in Marine Habitat at proposed LTFs are being accepted because identified species are common throughout SE, which is a disregard of traditional subsistence use and present commercial activity.
- V-D3
- XI-A2
- V-B2

Dear Sirs

I thank you for sending me the Southeast Chichagof planning area information. Your decisions directly affect me.

I agree with your choice of preferred alternative E. Many of the units to be cut would be accessed by already existing road systems, lowering the risk to produce sediment as shown table S-4.

The habitat capability is virtually unchanged between alternative E and not logging at all (Alt A2), and alternative E uses some of the existing L-T F's

Sincerely,

Steward H. Stephens

Steward H. Stephens

Log Scale

August Sound Log Scaling Bureau

Stationed: Corner Bay

City of Tenakee Springs

City of Tenakee Springs
Comments on SE Chichagof DEIS

Page 3.

Gordon Anderson
Southeast Chichagof Project Planning Team

Page TWO

7. Noise pollution and air traffic patterns are not addressed.
8. Permanent roads are proposed for construction for administrative purposes without saying what is being administered. After the logging is done, it would be cheaper to charter into an area as needed than to maintain a road and buy and maintain vehicles to use the road. Permanent roads have not been justified.
9. Impacts of log rafts, and their traffic patterns in the inlet, on the other uses of upper Tenakee Inlet, subsistence, commercial, tourist and recreational have not been addressed.
10. These proposals are before us at a time when the community can least respond to them and in disregard to the economic activities that takes many of our residents away from their homes at this time of year.

In conclusion, the City of Tenakee Springs concurs with the City of Angoon that there is a non-responsiveness to the needs of the non-logging communities and requests that there be a supplement to the DEIS displaying an alternative that harvests a volume of timber consistent with the objectives of the non-logging communities, consistent with true multiple use of the forest, and complying with present federal laws.

The city feels there could be a reasonable alternative from a cooperative effort as proposed by the City of Angoon and hopes that this will be given serious consideration. Attached are comment on specific areas. Thank you for the opportunity to comment.

Sincerely,
CITY OF TENAKEE SPRINGS

Gordie Paddock

Edna Paddock
Mayor

IV-A

The 45 day comment period on the Southeast Chichagof DEIS coincided with the start of crabbing, a black cod opening and a halibut opening, the beginning of tourist season, and other seasonal socioeconomic activities important to rural residents. These massive documents and the respective comment periods should be scheduled for low activity times, such as January and February.

XII-A2

The Southeast Chichagof Sale is in the A-1 Allotment Area. In the contracts, APC has agreed to confine their cutting to Allotment Areas B & H. In the event there is less than the 4,947 mbf of timber available for APC in the agreed upon Allotment Areas B & H, the contracts state that the Forest Service shall designate additional areas in "C" (Kuiu Island) or may designate areas in "A-1". There remains approximately 2,447 mbf of timber to be awarded to APC over the life of the contract (until 2011). It has not been shown that this amount is/and will not be available in Allotment Areas B & H through the life of the contract. The general statement that sufficient timber remains in the designated areas, including areas A-1 and C, to provide the remaining timber does not prove the timber could not be provided from areas B & H alone. Unless this is proved this sale does not conform to the contracts.

The analysis that led to the selection of the SE Chichagof Project Area included political judgements ("Areas north of Sitka, and the adjoining VCIIs and islands, are thought to have high public interest and high potential for resource use conflict.") that eliminated areas in Allotment Areas B & H that could provide the volume now being proposed from the "A-1" area. Again, this sale does not conform to the contracts. The contracts do not say that in order for APC to maintain a low profile near Sitka they can go to other areas outside of their agreed confinement of cutting to Allotment Areas B & H; nor does it say the Forest Service can do it.

XII-C1

There are contradictions in the DEIS between management direction defined by Congress and USDA Forest Service emphasis on timber production at any cost. The DEIS fails to acknowledge the value of resources and activities other than timber harvest and does not show the effects of large scale clearcutting on those resources.

XII-A3

There is a basic contradiction in USDA Forest Service subsistence policy. Page 3-69 provides a description of subsistence and the direction by ANILCA that subsistence and renewable resources "shall be the priority consumptive uses of all such resources on the public lands of Alaska". It should also be stated that, the Tongass Timber Reform Act reaffirms that "timber first" management must cease. This DEIS continues USDA Forest Service management decisions which give clearcutting the highest priority.

There is acknowledgement that large scale logging operations have long term negative effects on fish and wildlife. Page 4-141 states that within the range of the action alternative's proposed habitat reduction there "will be sufficient deer for subsistence use in Tenakee" primary hunting area through the year 2000 but insufficient deer available for both subsistence and non-subsistence use by the year 2010".

City of Tenakee Springs
Comments on SE Chichagof DEIS

Page 4.

XI-A-B

It is further stated, there is a "significant possibility of a significant restriction of subsistence use of deer for Tenakee residents". The DEIS proposes to solve this by restricting non-subsistence use at the time this severe deer population reduction occurs and suggests that local residents hunt elsewhere. This is a clear violation of legislated direction given to the USDA Forest Service and the range of alternatives should be revised to achieve the goals defined by Congress.

In Tenakee Inlet, the DEIS affects Crab Bay, Saltery Bay and In-between. These areas are part of the Alaska Department of Fish & Game (ADF&G) Wildlife Analysis Area (WAA) 3629, which extends from Crab Bay to Long Bay. The ADF&G "Strategic Plan for Management of Deer" gives a detailed analysis of the entire south shore of Tenakee Inlet and concludes that since hunter demand already exceeds habitat capability in WAA 3629 any further loss of habitat should be avoided.

The DEIS has been prepared under the old Tongass Land Management Plan which designated Seal Bay and Long Bay as LUD 11 (roadless). This gives the impression that the proposed activities are surrounded on the one side by the Kadashan Legislated LUD 11 region and on the other side by LUD 11 Seal and Long Bays. In reality, the preferred alternative under the new Tongass Land Management Plan. DEIS shows Seal Bay and Long Bay in a category that permits clearcutting. It is a fact that every watershed in Tenakee Inlet except for Kadashan and Trap Bay, both protected by federal law, will be open to extensive clearcutting under the new Tongass Land Management Plan.

VI-D

XI-B

The statement in the last paragraph of the DEIS Appendix A-11, that Kadashan has excess population and can accommodate hunters displaced by habitat loss elsewhere is evasive of the loss of traditional habitat use and an unsupported conclusion. It also suggests reduction of wildlife populations through habitat destruction can be remedied by reducing any remaining healthy population through overhunting.

The DEIS ignores the importance to Tenakee Springs of non-subsistence deer hunting. Visiting hunters rent cabins, buy food and supplies and obtain services locally. Habitat losses that result in restrictions on non-subsistence hunters will harm the economy of Tenakee Springs by eliminating that income. The economic impacts of non-subsistence hunting are not disclosed in the DEIS.

Although there is some acknowledgement on the impacts of clearcutting on deer populations, there is no admission that clearcutting affects anything else. Page 12 of the Summary says "None of the alternatives is expected to have a significant impact on the commercial fishing, recreation, and tourist industry, or related employment". This does not concur with page 15, which states that all action alternatives will affect persons seeking primitive or semi-primitive recreation opportunities, and that the "use of boat anchorages in Saltery Bay and Crab Bay may be affected for three to five years due to LTF's, logging camps, and log raft storage that would occur during timber harvest activities. These are serious impacts to people employed in the commercial fishing and recreation and tourist industries, as well as to those accustomed to subsistence and independent recreational use of these areas. Further, it is obvious that actions affecting boat anchorages will affect both commercial fishing and charter boat operations."

V-A

City of Tenakee Springs
Comments on SE Chichagof DEIS

Page 5.

V-A

In recent years there has been a resurgence of locally based fishing for shrimp and Dungeness crab in Tenakee Inlet. Most participants are local people with long term commitments to the community, who are rightly concerned about the effects of log transfer facilities - with associated bark debris, fuel spills and other pollution - on the health of delicate estuarine ecosystems. There is an obvious conflict between shrimp and crab floats and log barges. A local fisherman lost a large quantity of expensive gear when weather conditions in Chatham Straits caused a passing tug to pull into Tenakee Inlet with rafts of logs. To ignore the present activities occurring on Tenakee Inlet waters is inexcusable - there will be conflicts with log barges and LTFs up the inlet.

Besides the importance of visiting deer hunters to Tenakee Springs's fall economy, there is the increasing popularity of Tenakee Springs with vacationers and sightseers from Alaska and from all over the world; these are people who come specifically to Tenakee Springs, not just passing through as they tour SE or Alaska in general. Attributes contributing to and causing these activities have not been evaluated accordingly.

Last summer a young man born and raised in Tenakee Springs had a very successful season as a professional guide, escorting sightseers with an emphasis on wildlife viewing. He utilized Crab Bay and Saltery Bay on a regular basis without taking anything away from the enjoyment of the next visitor. Local experience with tourists confirms that people come to Alaska to see wildlife and wild country, not to admire industry. In past years a Juneau outfitter ran very popular Kayak trips from Hoonah to Tenakee Springs, which contributed to the economy of both towns. Extensive clearcutting in Port Frederick reduced the desirability of that tour to the extent that it is no longer offered. The DEIS does not show the negative effects of the alternatives upon these economic activities and how they affect their development and growth.

In summary the Southeast Chichagof DEIS does not reconcile its non-conformance with the demands of the APC contracts, the conflict between continued large scale clearcutting and other sustainable uses of resources, and gives priority to timber harvest operations at the expense of subsistence, tourism, recreation and commercial fishing. The USDA Forest Service must develop new management strategies which comply with ANILCA and the Tongass Timber Reform Act, and provide for a sustained availability of all forest resources for future generations.

V-B

Helen Trotter

June 20, 1992

United States Department of Agriculture
Forest Service
Alaska Region
Juneau, AK

N-C I find your set of maps deceptive and a travesty. There really is no room for public input. The choice for clearcutting is none or practically all or all; and we both know that none will never prevail. Why waste all the money, time, and postage to carry on this farce?

Sincerely Yours.

Helen Trotter

Helen Trotter
4140 12th st. SE
Salem, Ore. 97302

Bill Whitman

General Delivery
McCall, Idaho 83638
June 25, 1992

Southeast Chichagof Project Planning Team
USDA Forest Service, Tongass NF, Chatham Area
204 Siginaka Way
Sitka, AK 99835

1-D Thank you for allowing everyone to give input on this project. Ideally I would prefer Alternative A. Should this alternative not be feasible, I would be the least dismayed with Alternative C, primarily because it would not call for a road across the head of Grab Bay in VCU 232. This area is heavily used by bears when the salmon are running, and is a significant pink and chum spawning area. I believe it should remain as intact as possible. Thank you for your attention.

Sincerely,

Bill Whitman

Bill Whitman

June 2nd, 1982

Mr. Gordon Anderson
SE Chichagof Project Planning Team
204 Saginaka Way
Sitka, Alaska 99835

Dear Gordon,

I would like these comments on the SE Chichagof DEIS entered in the record.

My first comment is an objection to the timing of the comment period. As usual it has been timed for the late spring/summer/early fall period, a time when subsistence users, fishers and seasonal workers in the rural communities are at their busiest and unable to take the time to read and comment on the DEIS. As this has happened so regularly over the years, despite repeated requests for better timing of these documents, I can only assume that it is being deliberately done. NEPA requires that the public be given an opportunity for meaningful participation in the planning process; the timing of the hearings and the comment period precludes that possibility.

The DEIS indicates that there is a significant possibility of significant restriction of subsistence use of deer for Tenakee residents. The USFS is not offering an alternative that would avoid that restriction. The alternatives are either ALL (over 100,000 bbf) for nothing at all (and we all know that the no action alternative is not being seriously considered by the USFS) or ANILCA requires that subsistence use have priority and NEPA requires that the USFS take a close look at a wide range of alternatives. Our choices are limited to the Forest Service's preexisting plans, which, as usual, favor the timber beasts.

I request that the Forest Service offer a supplemental DEIS that offers a wider more reasonable variety of cut alternatives. In addition the FS should recommend that the 50 year contracts be cancelled since the Forest Service seems unable to provide for the mills as well as the needs of the residents of Southeast Alaska.

The USFS has not considered logging and the effects it has on tourism. Many of Tenakee's local residents, including my family are dependent on the tourism industry. Clear cuts and tourism are not good bedfellows. I hear many negative comments on Tenakee logging practices while riding the ferry.

Any of the alternatives except the NO Action Alternative will negatively impact the commercial fishing and sports hunting and fishing industries which are extremely important locally.

Any roads that are constructed in the chosen alternative must be closed to recreational vehicles during the harvest period and be permanently closed after logging is finished.

I would appreciate it if my comments and those of other people who are your logging practices would be given some consideration.

Sincerely, *Diane M Ziel*

Diane M. Ziel PO Box 44 Tenakee Springs, Alaska 99841

Response to Late Comments

Three letters were submitted with comments concerning the Southeast Chichagof Draft EIS after the deadline of June 29th, 1992. We were unable to address these letters with the other public comments at the beginning of this appendix. One of these letters was from the State of Alaska, Office of the Governor. Due to agreements with the State of Alaska regarding the management of the National Forest, the Forest Service will formally respond to the State's comment in this section of Appendix C. In addition, the letter from the State of Alaska has been copied and is located directly after these responses.

We also received late letters of comment from Sandra Mesk and from the Alaska Forest Association, Inc. We will not respond specifically to those letters; however, we hope our responses here to the State and elsewhere to other individuals and organizations satisfy the concerns of Ms. Mesk and the Alaska Forest Association.

After a thorough review of the State's letter, the Forest Service addresses the following comments:

SECTION 319 CLEAN WATER ACT COMMENTS

FS RESPONSE:

1.(Comment on p.3): Please see Comment XIII.A in Public Responses for additional information. Implementation monitoring is part of the administration of a timber sale contract and assesses whether or not the project was implemented as designed and whether or not it complies with TLMP. Implementation monitoring is primarily the responsibility of the sale administrator and road inspector. These individuals are well qualified to ensure implementation of the direction for timber harvest and road construction specified in the silvicultural prescriptions, Harvest Unit Design Cards, and Road Design Cards.

Hydrologists, soil scientists, and others are not required to immediately review all the units or road segments in order to determine if they were implemented as planned. They do, however, plan to yearly monitor 10 percent of the units and roads for compliance to the prescriptions established on the Harvest Unit Design and Road Design Cards.

2.(Comment on p.3): The standardized rating system developed by the BMP Implementation Monitoring Working Group for the Tongass National Forest is currently used in monitoring. Four effectiveness monitoring study questions have been approved through the Chatham Area Information Needs Assessment (INA) for BMP Monitoring in 1992. The four questions relate to: 1) use of macroinvertebrates to help monitor the effectiveness of mining oriented BMPs; 2) evaluation of buffer strip blowdown and the effectiveness of buffers in protecting channel and fish habitat integrity; 3) evaluation of the effectiveness of road drainage, culvert design, and maintenance in maintaining fish passage and water quality conditions; and 4) evaluation of the effectiveness of timber harvest and road BMPs in limiting the occurrence of significant (>10 cubic yards) mass-wasting events.

State water quality standards are the standards against which effects are measured. Typical mitigation measures included in the effectiveness monitoring are fertilization, planting, and

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seeding of roads, landslides, and cutbanks to re-establish vegetation. Typical mitigation for roads includes road maintenance, road closure, removal of culverts and bridges, and construction of waterbars.

3.(Comment on p.3): Monitoring is designed to determine if the resource management objectives of the Southeast Chichagof EIS have been achieved. The results will be used to verify implementation and effectiveness of selected mitigation and protection measures in a timely manner. Regardless of which alternative is selected, monitoring activities will be conducted over the course of the project to determine if standards and guidelines for the Project Area have been met.

Possible adverse impacts from the proposed actions on the soil and water resource is reduced by 1) adherence to the Soil Management Handbook, the Aquatic Habitat Management Handbook, and the Best Management Practices (BMPs) in the Soil and Water Conservation Handbook; and 2) the application of resource protection provisions of the APC Timber Sale Contract. The BMPs, in particular, are designed to maintain State water quality standards. The Forest Service cooperatively works with the Alaska Department of Environmental Conservation (DEC) under a Memorandum of Understanding (MOU) relative to BMP monitoring.

In addition, the Chatham Area is in the process of developing a BMP effectiveness monitoring plan. One aspect of this plan guides the monitoring of the effectiveness of stream buffers on maintaining fish habitat. BMPs are the primary tool on the Tongass National Forest to mitigate the effects of logging activities on water quality. Two sediment monitoring studies conducted by the Forest Service in the Indian River and Kadashan watersheds on Chichagof Island were designed to gather quantitative sediment yield data to evaluate the effectiveness of forest management BMPs in meeting water quality goals. These studies concluded that "under typical conditions represented by the Indian River and Kadashan study sites, BMPs were successful in preventing or minimizing sediment inputs from logging and road building to levels that are probably within the range of natural sediment yield." The studies also concluded that "some short term degradation of water quality from increased turbidity and suspended particulates is unavoidable, particularly during road building." In summary, the studies conclude that overall road construction does not exceed long-duration standards.

As a result of these studies and our analysis, it is expected that the effects on water quality will not be significant. Further, it should be recognized that other past, present, or future actions will be, for the most part, isolated from the actions proposed in this EIS. They will be isolated either by time or distance. This will reduce the possibility that cumulative effects will be deemed significant. The effectiveness monitoring plan will identify any adverse cumulative effects of the proposed actions.

NEPA COMMENTS

FS RESPONSE:

(Comment on p.4): The maps on the Road Design Cards have been improved; the scale has been changed; and the roads have been numbered. We are continually looking at ways to improve our maps so they will be more informative and easier to understand.

Examination of the Preferred Alternative E and Alternative C (Comment on p.4): The benefits of Alternative C relative to the preferred Alternative E were taken into consideration by the responsible official prior to the selection of Alternative E as the preferred alternative. Alterna-

tive E was chosen as the alternative most responsive to the broad range of issues as they relate to the Alaska Pulp Corporation Long-Term Timber Sale Contract and the Southeast Chichagof Project Area. Alternative E locates activities at least one mile inland and protects important wildlife and subsistence habitat. Throughout the design of units and roads, and in the formulation of all of the alternatives, wildlife values and water quality were considered.

Although Alternative E would not necessarily provide for a greater economic return in the short-term, it would have greater long-term benefits than Alternative C. Alternative C, by concentrating activities in previously harvested areas, provides little further access of the Project Area. As a result, it defers the cost of road construction to later entries. In addition, re-evaluation of the mid-market assessment presented in the Draft EIS revealed that an error was made in the estimation of road maintenance costs. This correction, plus other minor updates to the alternatives for the Final EIS, resulted in positive net values for four of the five actions alternatives (refer to the *Economic and Social* section of chapter 4).

VCU 246 was not avoided in the preferred alternative because it is designated LUD IV, with emphasis primarily on commodity or market resources. Comments concerning the Kook and Little Basket Lake drainages have been noted.

Wildlife (Comment on p.6): We concur and have changed "carrying capacity" to "habitat capability" in the document. The term "pine marten" has been changed to "marten" in the document.

Water Quality (Comment of p.7): All units with high hazard soils are identified on the Harvest Unit Design Cards. Planning records are available for review which display the actual location of hazard soils.

GENERAL ADVISORIES

FS RESPONSE:

(Comment on p.10): DFG and DEC are correct in their observation that some of the Harvest Unit Design and Road Design Cards were incomplete in the Draft EIS. These cards have been updated and completed in the Final EIS.

DFG PAGE-SPECIFIC COMMENTS

(Ch. 2, p. 31, para. 2, Mitigation measures)

It is inappropriate to say the effects from logging camps "will be mitigated" by Forest Service or ADF&G actions prior to those actions taking place. The assumption is that the actions will be successful. However, even the mitigation is a proposal to communicate with logging camp residents rather than a commitment to undertake specific action. The best that can be said is that the USFS hopes that the mitigation actions it plans will reduce the likely impacts of development and human activity on brown bears.

FS RESPONSE: We agree, the statement has been revised in the Final EIS to "should" instead of "will". Experience in several southeastern Alaska communities, as well as elsewhere in the lower 48, has shown that proper disposal of solid waste and public education programs have been effective in reducing bear-human interaction and affecting public attitudes and actions.

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(Ch. 2, p. 32)

We are pleased to see that no beach fringe, estuary, or riparian wildlife habitats are proposed for harvest under the preferred alternative. We hope this will also be the case for the alternative or combination of alternatives chosen in the ROD.

FS RESPONSE: Thank you.

(Ch. 2, p. 47)

The assumption that validation monitoring is the responsibility of the Regional Office to the Forest Service is a continuing problem in which each Forest Service management level passes the responsibility to another. One unfortunate result is that the activity may never get done or is done at a minimum reporting level. Some assumptions and models have been developed through research at the regional level, but they are applied differently for each timber sale. An example is the methods used for determining timber volume of harvest and selecting retention areas for wildlife. Who will monitor the wildlife retention areas in this sale to see if they are protecting wildlife values? Realistically, we do not expect Regional Office staff will be concerned with monitoring retention areas on this part of Chichagof to see if model predictions of habitat capability changes are accurate. Validation of the applications of the models and assumptions used by each project should be the responsibility of the Area and/or District in which the project occurs, as well as follow-up by the Regional Office.

FS RESPONSE: Please review FS RESPONSE IX.A.2 in the *Response to Public Comments* section at the beginning of this appendix.

(Ch. 2, p. 47ff., Implementation monitoring)

We appreciate seeing a more detailed monitoring plan presented in the Draft EIS. However, we wonder why only 20 percent of stream buffers, cutting units with wildlife concerns, and water quality sites will be checked. This seems far too low to ensure compliance. In addition, most plans allow 10 percent variation or deviation between plan targets and implementation. Why allow any deviation from stated resource protection goals?

FS RESPONSE: Please see FS RESPONSE IX.A.2 in the *Response to Public Comments* section at the beginning of this appendix. In reviewing the specific plans displayed for implementation monitoring in Chapter 2, eight of the thirteen plans will require a 100 percent measurement, not a 20 percent sample. Of the five plans requiring a 20 percent sample, three (timber sale layout, timber unit logging, and stream buffers-TTRA) will most likely be monitored for greater than 75 percent of the units. This is due to their sensitive nature and a concern for the protection of the resources. Of the thirteen plans, only six had a threshold of a 10 percent variation between plans and implementation. A 10 percent variation is a reasonable allowance to determine the need to adjust for unexpected or new information.

(Ch. 2, p. 52 ff, Effectiveness monitoring)

Concerning the proportion of timber harvest, we question whether the TIMTYP database is the appropriate one to use for monitoring proportionality. See general comments.

FS RESPONSE: The direction found in Forest Service Handbook 2409.18 Region 10 Supplement No. 2409.18-92-5 identifies the TIMTYP database as the basis to be used for determining compliance with the Tongass Timber Reform Act's (TTRA) proportionality requirement. The TTRA refers to "TLMP and supporting documents" for the definition of Volume Classes 6 and 7. TIMTYP is the timber resource base used by the TLMP that defines the inventoried volume class distribution of the Forest and has been interpreted to be the appropriate database to use for monitoring proportionality.

(Road use post sale)

Measurement plans appear to overlook the possible use of snow machines on roadbeds during the winter trapping season, November through March. Inspections of these road systems should also be made in winter to check the effects.

FS RESPONSE: The road systems will be monitored for all road use (including snowmobile traffic) to determine consistency with Road Management Objectives (RMOs). RMOs include consideration of use by all ATVs (including snowmobiles). Monitoring of use during the winter would include periodic flights over the road system.

(Stream buffers)

The evaluation section appears to allow buffers to vary as much as 10 percent from the prescribed width. Again, why allow any variation from prescribed buffer width, especially one mandated by law?

FS RESPONSE: Direction has been outlined in the Harvest Unit Design Cards and silvicultural prescriptions to provide for windfirm, stable stream buffers. Thus, if necessary (in order to provide a stable buffer), a buffer that is greater than the minimum 100 feet will be established. In fact, as was usually the case, the designed buffer strip width exceeded the 100-foot minimum width required by the TTRA (Refer to Table 4-51 in the Final EIS). As stated, the effectiveness monitoring item seeks to evaluate the effectiveness of the buffer design features. A 10 percent variation is a reasonable, realistic tolerance level from which to evaluate the stream buffers to determine the design's success.

(Wildlife, deer)

The evaluation section should be changed. The assumption that weather alone can be defined as causing declines in wildlife renders this monitoring program relatively meaningless. Timber activities exacerbate the effects of weather by removing shelter and thermal cover and by removing canopy that would keep forage plants from burial by snow.

FS RESPONSE: Your interpretation is incorrect. The wildlife evaluation section does not assume that weather alone can be defined in causing declines in wildlife but states, "If there is apparent deviation from past harvests, assess known factors and determine if it can be correlated to timber harvest operations, or if other factors might be equally responsible (weather, season changes, etc.)." See the *Effectiveness Monitoring* section in Chapter 2.

(Ch. 3, p. 37ff, Wildlife, Affected Environment)

This section is generally good, containing much useful and relevant information. Notably missing, however, are the ADF&G deer population objectives. Although we recognize the objectives are not minimum mandatory standards, they should be presented in the impact analysis as an indication of ADF&G's estimation of what is necessary to meet deer hunter demand.

FS RESPONSE: We agree. ADF&G deer population objectives have been added to the Final EIS.

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(Ch. 3, p. 47, para. 2)

The statement that deer feed on seaweed in winter implies that seaweed is a viable form of nourishment "when most of their preferred browse is unavailable". In fact, only deer that are starving eat seaweed, and even then only as a last resort. Seaweed cannot sustain a deer, and it is certainly not an alternative to forested habitat. That line in the Draft EIS should be deleted.

FS RESPONSE: We agree. The sentence has been deleted.

(3-68 ff)

The general discussion of subsistence is much improved over previous EISs. The summary in Ch. 3 provides a good regional overview of subsistence and is sensitive to the complexity, diversity, and importance of subsistence lifestyles and economies in Southeast Alaska.

FS RESPONSE: Thank you.

(Ch. 3, p. 69, para. 2)

It is incorrect to suggest that Goldschmidt and Haas only identified land-use patterns pertaining to the mid-twentieth century. Goldschmidt and Haas mapped and described areas of aboriginal use and ownership and historic and contemporary use areas to 1946.

FS RESPONSE: We agree. Changes have been made to the Final EIS.

(Ch. 3, p. 69, last para.)

In addition to the territory of the Wucitan (Wooshkeitaan) and Kaukweidi Tlingit clans, the Project Area falls within the traditional use areas of the Decitan (Deisheetaan—took over Ganaxadi territory in Sitkoh Bay) and Teikwedi (Teikweidi—Peril Straits area) and possibly other clans which were localized in Tenakee Inlet.

FS RESPONSE: We agree. Changes have been made in the Final EIS.

(Ch. 3, pp. 81-82, Table 3-43)

Column heading WAA 3639 should be WAA 3630. Also, some of the mean harvest calculations for this column appear to be incorrect (Ketchikan should be 4, not 2, Juneau 11, not 18, etc.). The word "use" should be eliminated from Tables 3-43, 3-44, 3-45 since use implies hunter effort, not actual harvest; harvest is what the numbers in the columns represent. Figures for hunting effort are measured in days and are available from ADF&G. Many hunters use areas but do not report harvesting deer on ADF&G hunter surveys. Similarly, the word "importance" in the title and column heading of Table 3-45 implies more than the figures for average percent of community harvest actually convey. The figures in this table merely reflect the composition of the deer harvest from a harvest survey. Measuring the importance or relative importance of deer harvest by WAA is something local communities need to help define.

FS RESPONSE: Table 3-43, column heading WAA 3639 has been changed to WAA 3630. The word "use" was eliminated from Tables 3-43, 3-44, and 3-45. We have left the word "importance" in the Table 3-45 because we feel it reflects the relative importance of harvest to the communities, although it is not a complete indicator.

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(Ch. 3, p. 83, para. 3)

It is correctly reported that Angoon residents harvest 74 (edible) pounds of deer per capita. If Angoon has a population of 540 and it is assumed that a deer has roughly 80 pounds of edible meat, this means that Angoon residents harvested some 500 deer in 1987. A study by the Division of Subsistence (see George and Bosworth 1988) estimated the average annual Angoon deer harvest between 1984-1986 to be 525 deer. It is important to note that these estimates are as much as 50-100 percent higher than estimates generated from the ADF&G deer hunter surveys for the same period. Our evaluation of the data suggests that these discrepancies are attributable to poor response rates and other factors affecting responses to the deer hunter surveys (see George and Bosworth 1988:80-82). This underscores the need to use the deer hunter surveys with caution, and to incorporate other sources of deer harvest data, including TRUCS and Division of Subsistence community studies.

FS RESPONSE: We agree and have worked very closely with the Subsistence and Wildlife divisions of the ADF&G to ensure that we utilize their data accurately. We have incorporated TRUCS data throughout the subsistence analysis and referenced State studies where appropriate.

(Ch. 3, p. 104)

The section on roads is weak. Our data suggest that ATVs are used extensively in some areas, such as Sitkoh Bay and Corner Bay. The Draft EIS says, "ATV use may occur; however, the Forest Service currently has no data which would indicate where ATVs are used." We recommend that Final EIS incorporate our information, and further, that ATV use be monitored in the Project Area.

FS RESPONSE: Comment noted. This has been changed in the Final EIS to acknowledge ATV traffic does occur out of Corner Bay and False Island road systems. Monitoring of ATV and other road use will be accomplished to determine if post-harvest use is consistent with the Road Management Objectives.

(Ch. 4, pp. 42-43)

The second column of Table 4-37 appears to be mislabeled. From the narrative on the preceding page, it seems it should read "2000." Likewise, when compared to narrative, it appears the first two columns of Table 4-38 should read "Acres in 1961" and "2000," respectively.

FS RESPONSE: We agree. Changes have been made to the tables in the Final EIS.

(Ch. 4, p. 73)

We hope the definition of streamside riparian used in the Draft EIS is the scientific one. From the wording on this page, it appears a more legal definition is being used, i.e., a word meaning only the 100 feet which make up the TTRA buffers. As discussed in the USFS Channel Type Handbook, riparian habitat width and appropriate prescriptions for development vary a great deal according to the characteristics of the affected stream reach.

FS RESPONSE: Streamside riparian, according to TLMP, is forested areas within 500 feet of an anadromous spawning area. The reference to TTRA buffers in this section is wrong and has been changed in the Final EIS.

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(Ch. 4, pp. 80-82)

In the discussion of effects on both brown bears and martens, it is stated that impacts of logging camps and roads will be minimal *if* roads are closed (emphasis added). The misleading impression given is that roads will be closed. However, according to the road management objectives, practically no roads will be closed in the preferred alternative. Roads and human disturbance, habituation, vehicle access during and after the timber harvest period, should all be displayed in the EIS. Roads are also a great concern in regard to marten. The EIS should note that during the three years or more of timber harvest activities, impacts to marten populations from road access and trapping by logging camp residents can be substantial. Without road closures, the use of snow machines by trappers can also affect marten populations. Monitoring effects of roads on marten should include winter use of roads. We recommend that the FS involve local communities and the State in an active program to mitigate impacts through road management.

FS RESPONSE: Please review comment IX.B.2 in the Response to Public Comments for additional information. The road management objectives are conservative and restrictive to public recreation. Management objectives discourage or eliminate public access throughout the Project Area, with the only exception being roads 7540 and 7551. Roads 7540 and 7551 are mainline roads that will be managed to accept public access. Generally, roads increase access which can contribute to an increased take of game. The Forest Service does maintain the option to permanently close or seasonally close roads as the need arises. The Forest Service welcomes and encourages the State's cooperation with monitoring the effects of roads on marten and bear harvest and cooperatively planning any needed mitigation. Since the State has the responsibility of setting and enforcing seasons and bag limits we feel this cooperation is necessary. The agencies have worked cooperatively to close roads and monitor harvest in the northeast Chichagof area near Hoonah and we feel that same cooperation can occur in the Southeast Chichagof Project Area.

Ch. 4, p. 101 ff)

We are disappointed to find that the effects on Juneau and Ketchikan hunters (nonrural hunters) are given little attention either in the *Wildlife, Environmental Consequences* section or the *Subsistence* section. If the proposed actions have a significant possibly of a significant restriction of subsistence use of deer as stated on pg. 4-151, then the consequences of that situation to Juneau and Ketchikan hunters should be displayed clearly and prominently in the Draft EIS. As the Draft EIS points out elsewhere, 8 percent of Juneau's deer harvest comes from the Project Area. Juneau hunters take more deer from the area than those from any other community, and non-subsistence hunters account for over 40 percent of the average annual harvest of deer in the area. Clearly, regulation changes to deal with restrictions to subsistence use would have a dramatic effect on nonrural hunters. The EIS should deal with this possibility openly and forthrightly.

FS RESPONSE: Comment noted and text addition made.

(Ch. 4, p. 102, last para.)

First sentence should be revised and clarified.

FS RESPONSE: We agree, and the revised version appears in the Final EIS.

(Ch. 4, p. 106)

Sentence on thinning second growth (in third paragraph) is also not clear.

FS RESPONSE: This sentence has been revised in the Final EIS.

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(Habitat Conservation Areas)

We are pleased to see this Draft EIS refer to the Habitat Conservation Areas (HCAs) of the interagency committee on viable wildlife populations. We are pleased the importance of such areas has been acknowledged in this document. DFG recommends that the areas shaded as old-growth acres in HCAs depicted in Figure 4-2 should be checked to see if they meet the criteria of HCAs proposed by the interagency committee. A report, drafted by the committee, is presently undergoing review. Some of the shaded areas appear to include areas of extensive clearcutting.

FS RESPONSE: The Forest Service is aware of the proposed criteria for the establishment of HCAs. The HCAs depicted in Figure 4-2 meet the specific criteria and qualify as either small, medium, or large HCAs.

(Ch. 4, p. 125)

The section on abundance and distribution seems to downplay project effects on WAAs 3309, 3629, and 3630 by stressing that these WAAs are already harvested at levels greater than the current population can sustain. The fact that these WAAs are already in danger emphasizes the need to avoid further decline in habitat capability where possible and should not be used to minimize or rationalize the additional impacts this project proposes. Such statements are found throughout the subsistence section.

FS RESPONSE: The intention of the statements in question are not to minimize or rationalize additional impacts but to help clarify the existing situation.

(Ch. 4, p 126)

The explanation of Table 4-88 is confusing. The coded bars do not show percent of WAAs harvested by rural and nonrural communities, but rather portions of the total deer harvest taken by different groups.

FS RESPONSE: The description of Table 4-88 as it appears in the document is correct.

(Figs. 4-4 through 4-9)

These figures give J. Kruse 1992 as their source. No citation for J. Kruse 1992 exists in the *Literature Cited* section. "Habitat capability" should be substituted for "carrying capacity" in the note for these figures. First sentence in narrative has an error: Table 4-88 shows percent of deer, not percent of WAAs harvested.

FS RESPONSE: Comments accepted, and changes were made in the Final EIS.

(Ch. 4, page 127, Fig 4-6)

This is mislabeled; WAA 3327 should be WAA 3627.

FS RESPONSE: The change to Figure 4-6 has been made in the Final EIS.

(Ch. 4, pp. 134-138)

This kind of mapped analysis, which overlays community subsistence patterns with proposed actions, should be required of every EIS. This is the only way that communities can evaluate the impacts of each alternative.

FS RESPONSE: Thank you.

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(Ch. 4, p. 139, Table 4-91)

This data is potentially misleading. The underlying premise here is, “the less direct overlap between lands used for subsistence and those used for timber harvest the better.” Although this seems logical, in fact, ecological relationships are much more complex than this. Just because most subsistence deer hunters harvest in the coastal zone and not in the upland areas, does not, in itself, mean that these hunters will not be affected by activities in upland areas. It is the old-growth timber in these upland areas which provides the critical habitat needed to maintain the deer supply. Thus, upland timber harvesting has the potential to significantly impact coastal zone deer harvest opportunities without there being any direct overlap between the two sets of acreages. Given this, the figures in this table require more explanation, and the justification and limitations of this kind of acreage analysis should be clearly stated.

FS RESPONSE: This table was developed by the Subsistence Division of ADF&G with the assistance of Jack Kruse. We disagree with your interpretation. The table simply portrays the number of acres used by more than 5 percent of community households in both WAAs and VCUs, and the number of those acres previously harvested and/or scheduled for harvest under the different alternatives.

(Ch. 4, p. 154, Access)

We are pleased to read that “Roads will be managed to prohibit use of vehicles, including ATVs, if monitoring indicates unacceptable impacts to subsistence.” But how will the use of hundreds of miles of roads be monitored or regulated? How will “acceptable” or “unacceptable” impacts to subsistence be defined and regulated? Section 810 hearing testimony from communities affected by this project indicates that 1) many do not favor roads for access and, 2) the introduction of roads has led to increased competition and depletion of resources in some areas. We would be pleased to work with the planning team to develop the monitoring and mitigation details prior to the Final EIS.

FS RESPONSE: Regulation of the use of the roads within the Project Area will be implemented per the direction in the Road Management Objectives (RMOs). The RMOs for the alternatives display a range of traffic control strategies including accept, discourage, eliminate, or seasonally restrict public access. RMOs define the intended purpose for the specific road; they do not specify monitoring. The actual use and the use-related impact to forest resources of the road systems will be monitored to determine if post-harvest use is consistent with the RMOs. The Forest Service will work with ADF&G, the local users, and the Southeast Alaska Federal Regional Advisory Council to monitor post-harvest road use and subsistence resource use where indicated to determine if unacceptable impacts to the subsistence resource are occurring as a result of road use and to define what is an “acceptable” impact.

(Ch. 4, p. 154, Competition)

The statement that “increased competition could occur from logging camp residents,” is an obvious one, but have the impacts of logging communities (especially those established in remote wilderness areas) ever been monitored or realistically assessed by the Forest Service? Many residents of rural communities have testified to the impacts of logging communities on the environment and subsistence. This testimony has been documented in Forest Service hearings and should be acknowledged in the EIS. Monitoring and mitigation measures for competition from logging communities should be clearly addressed in the EIS (see also general comments on mitigation above).

FS RESPONSE: There have been no studies to assess impacts from logging communities by either the Forest Service or the Alaska State Department of Fish and Game. Comments on

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page 4-95 of the Final EIS acknowledge the potential impacts caused by logging camp residents and offer mitigation measures to reduce potential effects. Monitoring is detailed in Chapter 2 with additional requirements proposed in the Record of Decision.

(Ch. 4, p. 155)

The statement that "The Project Area's remoteness makes it very unlikely that an individual household or even an entire community is highly dependent on specific areas within the Project Area that may be affected by proposed actions" is unfounded, unsubstantiated, and contradicted by the EIS's own findings with respect to Tenakee Springs. Tenakee and Angoon residents do not consider the Project Area remote; in fact, it encompasses substantial portions of their traditional use areas. Many Southeast communities are dependent upon resource areas which are not within their immediate vicinity. Physical distance is only one of many factors which influence subsistence patterns. The statement should be eliminated.

FS RESPONSE: Comment noted; statement deleted.

(Ch. 4, p. 156)

The findings on deer should be reiterated under the *Resource Findings* section; otherwise the category "Other Resources" in Table 4-96 could be (mis)interpreted to include deer. The fact that the deer findings are disaggregated from other wildlife makes the Draft EIS conclusions hard to follow.

FS RESPONSE: Comment noted and table heading changed to help clarify findings.

(Ch. 4, p. 158)

The reasoning presented here for why the project is necessary and consistent with sound management of public lands is not compelling. Why not choose other lands where the project's impacts on subsistence would be fewer, or define a broader range of alternatives? (See general comments under Issues 1 and 2.)

FS RESPONSE: The Tongass Land Management Plan directs which areas are managed for intensive timber harvest. The Forest Service has a target of 100 million board feet of timber to harvest from this Project Area. This is based on a timber sale contract with APC. Five alternatives were proposed which would meet our contractual obligations. Refer to Appendix A in the Final EIS and other responses to similar comments, e.g., I.A.1., in the Response to Public Comments at the beginning of this appendix.

(Ch. 4, p. 161)

Table 4-88 does not illustrate road projections.

FS RESPONSE: This sentence has been deleted from the Final EIS.

(Ch. 4, p. 198)

The spelling "consistence" does not appear as a word in the dictionary. It should be corrected from the fourth paragraph on this page.

FS RESPONSE: The correct word is "consistency".

SUBSISTENCE ISSUES AND CONCERNS

1.Selection of SE Chichagof as a project: The selection and scheduling of this project does not appear to have been influenced by subsistence consideration. Scheduling of this sale is discussed at 1-13 with more detail provided in Appendix A. The area bordering Tenakee Inlet and, along with the area along the Hoonah road system, has been one of the few areas in Game Management Unit 4 where demand for deer regularly exceeds the supply. If minimizing effects on subsistence were a scheduling goal, Southeast Chichagof might not be scheduled for logging as long as other areas are available for logging where subsistence impact might be less.

FS RESPONSE: Thank you for your concerns on how subsistence should be considered in scheduling. We have considered the demand and supply of deer in Game Management Unit 4 in our wildlife and subsistence effects analysis. Please refer to Appendix A regarding why scheduling now versus later makes little difference.

2.Consideration of project alternatives: The alternatives were developed along very different themes, and the Draft EIS did an excellent job of following through on the stated themes. Alternatives B through F, the action alternatives, however, call for a range of harvest of 108 to 137 MMBF. This range may not be sufficiently broad enough to include all reasonable alternatives as intended by NEPA. Since subsistence impact is often proportional to the size of the sale, we would like to have seen alternatives considered that call for significantly smaller harvests.

3,485 acres or roughly 100 MMBF (at 30,000/acre) of recently released timber covered by the SEIS will also be logged over the next few years in the Project Area. Actual logging activities that will take place in the area over the next few years do not vary a great deal under the action alternatives.

FS RESPONSE: Please review I.A in the Response to Public Comments and 1. above for additional discussion. In order for the Forest Service to fulfill its contractual obligations with APC, it was not reasonable to propose an alternative which proposed significantly less than 100 million board feet of timber for harvest.

3.Treatment of SEIS timber: While we recognize that SEIS timber harvest in the Project Area was subject to earlier EIS treatments and extended court review, the Draft EIS needs to better describe harvest of SEIS timber and possible effects on subsistence activities on this timber harvest. SEIS logging is likely to be attributed by the public to the Southeast Chichagof project. Specific on-the-ground activities may take place in conjunction with Southeast Chichagof Project activities and thus need to be considered.

FS RESPONSE: We believe that SEIS actions were adequately addressed in the Southeast Chichagof Draft EIS. The harvest acreage and effects of SEIS actions are included in the bases for the Affected Environment in Chapter 3 of the Southeast Chichagof Draft and Final EIS. The effects of SEIS timber harvest on the subsistence resource were included in the SEIS. The cumulative effects of that action and the Southeast Chichagof Project are included in the Southeast Chichagof Draft EIS and Final EIS for subsistence as well as other resources. SEIS-related harvest expected to be remaining at the signing of the Southeast Chichagof Record of Decision was recognized in the description and comparison of Alternatives A1 and A2 and clearly displayed on the alternative maps. It is expected that SEIS activities will be completed prior to the beginning of Southeast Chichagof's actions.

4. Section 810 determinations and requirements: The Draft EIS does an excellent job of examining impacts of past, present, and planned logging activities on deer habitat and deer supply. This analysis shows the level of deer harvest for each WAA by community, decrease in habitat capability over time, and likely impact on communities' subsistence use over time. Figures 4-15 through 4-24 include depiction of cumulative impacts under conditions of further logging and conservative human population growth and associated growth in demand through year 2040.

The Section 810 determinations are presented in Table 4-93. These determinations appear to be based primarily on Figures 4-15 through 4-24, and on limited discussion in the text on competition. While Table 4-93 does show that significant restriction may take place, we suggest that project and general impacts to subsistence uses be disaggregated and that both general community significant restrictions (as shown in Table 4-93) and site specific significant restrictions be shown. The following points address these suggestions:

a. The Draft EIS at Table 4-93 and in the text shows that a significant restriction may occur from the A1/A2 no action alternatives. This is confusing and makes the phrase "no action" appear to be a misnomer. What is going on here is a confounding of effects of this particular project.

b. Figures 4-5 through 4-9 show habitat capability, harvest demand, and effect of logging under conditions of planned logging and conservative growth in human population and demand. These graphs (and tables appearing elsewhere in the text) show that deer supply may not be sufficient to meet subsistence demand in the future (or at present) in some WAAs. These figures should provide the basis for a set of Section 810 determinations.

In order to be clear and to make site specific 810 determinations, the Final EIS should include 4 short tables that replace Table 4-93. These would show:

a. Significant possibility of a significant restriction of subsistence use of Sitka Black-Tailed Deer from project activities for Project Area by community.

b. Significant possibility of a significant restriction of subsistence use of Sitka Black-Tailed Deer from Project activities by WAA and by community.

c. Significant possibility of a significant restriction of subsistence use of Sitka Black-Tailed Deer from project and other Forest management for Project Area by community (this is existing Table 4-93).

d. Significant possibility of a significant restriction of subsistence use of Sitka Black-Tailed Deer from project and other Forest management by WAA and by community.

FS RESPONSE: Comment noted. Table 4-93 has been modified to reflect more specificity. We anticipate that it now addresses your concerns.

Appendix C

Response to Public Comments

5.Cumulative effects forestwide, WAA maps: The Draft EIS determinations presented in Table 4-93 and the community effects shown in Figures 4-15 through 4-24 are supported by tabular data presented in Appendix E. The document could improve presentation of cumulative effects and by including GIS products showing changes in habitat capability, subsistence deer harvests, and other forestwide analysis in the body of the text. The Division of Subsistence has draft mapped products that will help in this area.

FS RESPONSE: We have incorporated the Division of Subsistence maps into the Final EIS and have made appropriate text changes.

6.Mitigation of subsistence impacts: Mitigation of subsistence impacts need to be more explicitly identified. At page 2-31, mitigation measures that protect or enhance fish and game resources will also protect and enhance subsistence activities. While this may be generally true, we believe that the document should identify and state mitigation measures incorporated in the preferred alternative and additional mitigation that may be indicated to protect subsistence uses. Examples of mitigation incorporated into the alternative would include siting considerations that avoid LTFs or roads in intensively used subsistence use areas, avoidance of areas used for subsistence salmon fishing or marine invertebrate gathering. Additional mitigation that might be indicated would include specific regulatory proposals to the Federal Subsistence Board to change seasons or bag limits, restrictions on road use for deer hunting, etc.

FS RESPONSE: Specific subsistence mitigation measures are incorporated into the Record of Decision, Road Management Objectives, Harvest Unit Design and Road Design Cards, and Chapter 4. The Forest Service does not believe that this Final EIS is the appropriate avenue for specific regulatory proposals to the Federal Subsistence Board.

7.Subsistence monitoring: Monitoring of subsistence uses would be part of the monitoring plan 2-45 through 2-56. This monitoring should receive similar treatment to other monitoring activities.

FS RESPONSE: Comment noted.

OFFICE OF THE GOVERNOR

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July 20, 1992

Mr. Gordon Anderson
Team Leader
U.S. Forest Service
Chatham Area
204 Siginaka Way
Sitka, AK 99835

JUL 22 -

Dear Mr. Anderson:

SUBJECT: SE CHICHAGOF DEIS
ALASKA PULP CORP. LONG-TERM TIMBER SALE CONTRACT
STATE ID NO. AK920506-06J

The Division of Governmental Coordination has concluded the State of Alaska's review of the draft environmental impact statement for the Southeast Chichagof timber sale, according to the National Environmental Policy Act (NEPA). We appreciate the opportunity to participate at this stage of planning, and offer a consolidated response on behalf of the State resource agencies (Alaska Departments of Environmental Conservation, Fish and Game, and Natural Resources). As this review was conducted to satisfy the requirements of NEPA, the State comments include a broad range of issues.

Ultimately, per 15 CFR 930, Subpart C, the timber sale is required to be consistent to the maximum extent practicable with the standards of the Alaska Coastal Management Program (ACMP). At the time the USFS submits a federal consistency determination to the State, the State will conduct an ACMP review. Therefore, the State is taking advantage of this opportunity to also address potential ACMP issues. We hope these comments will be used by the USFS to help resolve outstanding issues prior to the ACMP review.

The State previously participated in a scoping review in May 1990, under State review No. AK900529-21J.

PROJECT DESCRIPTION

The purpose of the Southeast Chichagof project is to make timber available in accordance with the Alaska Pulp Corporation (APC) long-term timber sale contract.

Alternative E has been selected as the preferred alternative. Under this alternative, 130.2 MMBF of sawlog and utility volume would be harvested from 3,772 acres in 98 harvest units. According to the timber type maps from aerial photography (TIMTYP), 103 acres of volume class 6 and 7 will be harvested. The average unit size would be 38 acres, with four harvest areas being in excess of 100 acres. The harvest activity requires 54.1 miles of new road and reconstruction of 14.5 miles. Four log transfer facilities (LTFs) would be required by alternative E. The selection and design of harvest units and roads employed "new perspectives" concepts, as described on page 6 of the summary document.

The Tongass Land Management Plan (TLMP) designates the areas proposed for harvest under the SE Chichagof project as LUD (land use designations) III and IV. "Areas allocated to LUD IV provide opportunities for intensive development of resources. ... When conflicts over competing resource uses arise, conflicts would most often be resolved in favor of commodity values." "Areas allocated to LUD III are to be managed for a variety of uses. The emphasis is on managing for both amenity- and commodity-oriented uses in a compatible manner to provide the greatest combination of benefits. ... Allowances in calculated potential timber yield have been made to meet multiple-use coordination objectives."

There are six TLMP management areas (MAs) in the SE Chichagof project area:

MA C29 -- Tenakee Inlet, VCU 227. (VCUs 202, and 222 through 226 are in the MA, but are not within the project area). No harvesting activity is proposed in VCU 227. This MA is LUD IV.

MA C33* -- Long Bay, VCUs 228 and 229 -- LUD II (TLMP).

MA C34 -- Crab Bay, VCUs 230 through 234, and 246 -- LUD IV.

MA C36* -- Kadashan, VCU 235 -- LUD II (TTRA).

MA C37 -- Corner Bay, VCUs 236 and 238 -- LUDs III and IV.

MA C37a* -- Trap Bay, VCU 237 -- LUD II (TTRA).

* MAs C33, 36, and 37a were excluded from the land base used to assess proportionality.

SECTION 319 CLEAN WATER ACT COMMENTS

DEC offers the following comments pursuant to Section 319 of the Clean Water Act. The Alaska Nonpoint Pollution Control Strategy sets out the tasks that are required for compliance with Section 319. Further, the proposed final Memorandum of Agreement (MOA) between DEC and the Forest Service provides the primary guidance to the two agencies with respect to carrying out the strategy. DEC notes that a review of the unit and road cards suggests that the project area has a large amount of high hazard soils (e.g., high MMI, shallow, wet). The existence of such soils, particularly in proximity to watercourses, suggests that BMP monitoring may be particularly important for this project.

1. The implementation monitoring plan proposes that the monitoring of timber harvest and road construction activities be conducted by timber sale administrators and road inspectors. Currently, hydrologists and others conduct this monitoring. DEC is concerned that the administrators and inspectors may not have the training to carry out the plan. Is training proposed? If so, DEC would be pleased to assist in carrying out training sessions. They are also concerned with the time available to these individuals to conduct comprehensive implementation monitoring. Sale administrators, particularly, often do not seem to have the time to get their jobs done in the most effective manner. Can the State reasonably expect that they will have the time to do a thorough job on implementation monitoring?
2. Little BMP effectiveness monitoring is proposed for this project. While DEC understands that an overall strategy is being prepared, it is overdue. DEC urges the Forest Service to complete an effectiveness monitoring strategy for the Chatham Area as soon as possible. DEC personnel are available to help in the preparation of such a strategy, if the Forest Service needs or desires their assistance. Also, DEC would appreciate the inclusion of a summary of any currently existing data on the water quality of the project area. Finally, BMP effectiveness monitoring should measure the effectiveness of BMPs at meeting State water quality standards, and should include a mitigation component in the case that one or more BMPs is found not to be effective at protecting water quality.
3. The monitoring plan does not include a cumulative effects component. Cumulative effects are discussed in the document under each resource of concern. We infer from the discussion that some cumulative effects are anticipated to be significant. How does the Forest Service intend to determine if some of the cumulative effects of the project are significant? Also, if significant effects occur, what mitigation is proposed?

NEPA COMMENTS

DFG commented that this DEIS is an improvement over many in the past, and shows an effort to deal with many concerns they have expressed previously about timber harvest plans and their effects on wildlife, fish, and subsistence resources.

DFG is pleased that alternative maps include topography and existing and proposed clearcuts and roads. We are particularly appreciative of the map showing existing clearcuts and roads and productive forest land in the project area. However, although roads were shown on alternative maps, they were not identified by number, and the maps accompanying the road design cards in the appendices were generally poor and contained too little information to locate many of the roads on the alternative maps. Road maps and labelling need to be improved.

TLMP Land Use Allocations:

DNR has commented that the project is consistent with the current TLMP.

Examination of the preferred alternative E and alternative C:

While having no objection to alternative E, the State finds alternative C environmentally preferable to E with respect to water quality and fish and wildlife habitat, as follows:

Benefits of Alternative C:

- DEC comments that compared to alternative E, alternative C is estimated to have a lower risk of: (1) sediment deliver to class I streams; (2) soil disturbance due to timber harvest; and (3) sedimentation due to road building (both miles of road and number of stream crossings).
- Alternative C is projected to have a positive monetary return, and should have a greater monetary return to the State than does alternative E. Though there is little difference in the overall number of harvest units or average acreage size between alternatives C and E, there is a substantial difference in the volume of timber harvested per mile of new road construction between the alternatives (4.5 MMB per mile under C versus 2.4 MMBF per mile under alternative E). Thus, implementation of alternative C would appear to be more economically feasible since road reconstruction is substantially less expensive than new construction.
- DFG prefers the strategy of maintaining the essentially roadless character of VCU's 232 and 240 to maintain large unbroken blocks for ecological connectivity.

- DFG recommends consideration of environmentally-sensitive substitute volume for the proposed Little Basket Lake (3031, 3050, 3051, 3061, and 3070) and Kook Lake (1340, 1370, 1401) harvest units. Specifically, DFG is concerned about Kook Lake. As compared to alternative E, alternative C proposes to enter VCU 241 (Little Basket Lake) and also establish three harvest units on the south side of Kook Lake (VCU 239). In scoping comments, DFG has expressed concern for Kook Lake. Sockeye salmon streams on the islands in upper Chatham Strait are few and far between. There is limited information for the Little Basket Lake system regarding fish runs. DFG would recommend that the USFS substitute other units to maintain volume objectives of the alternative, with the additional potential positive benefit of a further reduction in road construction.

Benefits of alternative E:

- DFG has previously expressed concern about the high habitat values and human use of VCU 246. DFG supports an alternative which would avoid roadbuilding and timber harvest in this VCU. One benefit of alternative E is that it selects for harvest units elevationally higher in the drainages, reducing the impacts to high value wildlife habitat found at year-round accessible elevations. However, this strategy risks higher failures from mass-wasting and possible degradation of water quality.

Precommercial thinning:

DFG expressed appreciation that precommercial thinning was not portrayed as a mitigation measure for wildlife.

Wildlife:

DFG is pleased that Long Bay and Seal Bay have not been entered under any alternatives. They also agree with the plan that no road has been proposed for the Kadashan watershed. As addressed above, DFG would prefer that some form of an alternative avoiding Broad Creek and Broad Finger Creek be adopted. These drainages are in Wildlife Analysis Area (WAA) 3309, which is heavily used by deer hunters. Habitat capability in this WAA is already below hunter demand. The DEIS states on page 4-100 that habitat capabilities for Sitka black-tailed deer do not appear high enough to support the average level of harvest from 1987 to 1990 (10.5 percent, table 4-80) in WAA 3309, and even before 1961, they were probably not sufficient to support the average harvest at a level of 10 percent of the population. Projected timber harvest to the year 2011 would result in habitat capability decrease (alternative E would distribute the decrease between the years 1990 to 2000 and 2000 to 2011 entries; alternative C would result in smaller decrease in habitat capability between years 1990-2000 than between years 2000 to 2011). The summary document notes

the possibility of a significant restriction of subsistence use of deer in the project area (p. 17). DFG is concerned that the demand for deer in some WAAs already exceeds habitat capability, and the habitat capability would be decreased further in those WAAs by timber harvest. Thus, DFG recommends that declines in habitat capability should be avoided wherever possible.

The phrase "carrying capacity" should be replaced throughout the document by "habitat capability". Use of the same term consistently avoids confusion and misunderstanding by document reviewers.

The term "pine" marten should be changed in the document. Marten in southeast Alaska belong to the species Martes americana. Marten, or American marten, are appropriate common names, but pine marten should be reserved for the European form (M. martes).

Proportionality and harvest volume:

The Tongass Timber Reform Act (TTRA) directs the USFS to "eliminate harvesting a disproportionate amount of old-growth timber by limiting the volume harvested over the rotation in volume classes 6 and 7, as defined in TLMP and supporting documents, so that the proportion of volume harvested in these classes within a contiguous management area does not exceed the proportion of the volume currently represented by these classes in the management area." The DEIS states that the basis for the proportionality analysis is the timber type map (TIMTYP) in the USFS's GIS (p. 4-23). TIMTYP is the vegetation data base used for the Tongass Forest Plan Revision (TLMP). The maps were completed in 1978, and have been updated. Thus, concerning proportionality, TTRA requires: (1) the amount of high volume timber (class 6 and 7) be limited, and (2) the volume classification of timber be based on the definition in TLMP (noting that the TLMP definition is written in terms of TIMTYP).

The DEIS includes proportionality information for the following TLMP management areas (MAs) and VCUs:

- C34 -- VCUs 230-234, and 246
- C37 -- VCUs 236 and 238 (SEIS harvest that occurred after November 28, 1990 or is scheduled to occur is included in the projection of proportionality for this project).

DFG and DNR both commented on proportionality. DFG computed the acres of volume classes 6 and 7, basing their calculations on cruise information (on-the-ground) rather than the TIMTYP (used by the USFS). DFG calculated that 1,515 acres of volume class 6 and 7 will actually be harvested, as opposed to 103 acres according to TIMTYP. DNR commented that volume class comparisons should be based upon the same type of data that the USFS is

using (TIMTYP) (comments on North and East Kuiu Island Timber Sale APC Long-Term Contract). This, DNR believes, is interpreted to mean that TTRA is requiring use of TIMTYP.

The Division of Governmental Coordination (DGC) has considered both comments, and recognizes that the issue of differences in methodologies for computing high volume classes is a difficult situation with no easy solution. As in the State position dated December 6, 1991, for the Supplement to the DEIS for the TLMP Revision, the State recognizes that the proportionality provision may be subject to different interpretations and may be challenging to implement. At that time, the State requested that the final EIS should fully disclose an explanation of the USFS interpretation and proposed TLMP implementation of this provision. The USFS has stated that the TIMTYP is the existing data system which has been used in the forest plan for the entire Tongass Forest, use of TIMTYP in the present is the only way to achieve consistency forestwide, and to change the entire data system to accommodate on-the-ground survey information (which is available only for parts of the forest) forestwide is infeasible.

In the case of the SE Chichigof timber sale, the State accepts the TIMTYP data, but with objection for the record. The accuracy of this approach is clearly a question of considerable concern to the State. The main objection is the TIMTYP data base contains significant variations in volume estimation and classification since it is based on photo data. Ground survey data is substantially more accurate. If the TIMTYP map shows 103 acres of volume class 6 and 7 will be harvested, but the actual acreage is approximately 1,500, the difference between the TIMTYP and actual is significant. Again, in the December 6, 1991, State position on the TLMP Revision SDEIS, the State said: "In order to develop a higher degree of reliability in the forest planning process, the State strongly recommends that the Forest Service continue to refine the technical databases and models upon which forest and project planning are based, including the timber type and vegetation maps.... Additional research and monitoring funds should be prioritized to improve the models having the most influence on forest and project planning decisions." DGC believes the matter concerning the type of database to determine proportionality should be pursued outside the parameters of a particular project. We recommend that the Forest Service schedule a meeting with the State to pursue resolution of this issue.

Water Quality:

DEC requests, if feasible, a more detailed presentation of the location of high hazard soils and landslide-prone terrain, as well as a more detailed discussion of the sensitivity of specific watersheds with respect to sedimentation. This presentation could be in a map form, with some additional, more detailed tables. Such a presentation would be helpful in reviewing unit and road cards, and could provide information on the suitability of specific watersheds for BMP effectiveness monitoring.

Page-specific comments:

DFG submitted page-specific comments, which are in Enclosure 1.

PRELIMINARY ACMP COMMENTS

Upon implementation of the Record of Decision and the State's receipt of the federal consistency determination per 15 CFR 930.34, the timber harvest activity will be reviewed, according to the time allotted in the federal coastal zone management regulations 15 CFR 930.35 (45 days), for consistency with the standards of the Alaska Coastal Management Program (ACMP). The review standards are in the Forest Practices Act, Alaska Statute (AS) 41, with the exception of activities which would require permits. In accordance with AS 41.17.900(b)(2)(B), if timber harvesting or an associated activity requires State or federal authorizations, the ACMP standards in 6 AAC 80 will apply to those aspects requiring the authorizations.

DNR has commented that the project would be consistent, to the maximum extent practicable, with the ACMP as the federal land management plans, guidelines, and standards applicable to this timber sale provide no less resource protection than the standards that are established under AS 41.17 provide for State lands. AS 41.17.900(b)(2)(A) is met by leaving 100-foot buffers, per the Tongass Timber Reform Act.

The coastal district of the City and Borough of Sitka has commented that, after review of the activity against the Sitka Coastal Management Program, they have no objections to alternative E. Their detailed comments are enclosed.

Activities requiring other State or federal authorizations:

Log transfer facilities (LTFs), sortyards, and camps are associated facilities which are normally subject to ACMP review. While the DEIS provided general information about these facilities, the State's consistency determination will be issued upon conclusion of the coordinated ACMP review.

LTFs:

The plan considers five LTFs: (1) Corner Bay (existing); (2) False Island (existing); (3) Crab Bay (existing but needs reconstruction to install a slide facility); (4) Inbetween, in VCU 230 (existing, used in the past as a temporary site, and will be used only as a temporary site); and (5) Oly Creek (a new site). Alternative E would require four: Corner Bay, Crab Bay, Oly Creek, and Inbetween. Alternative C would require four: False Island, Corner Bay, Crab Bay, and Inbetween.

Sortyards:

Existing sortyards are in place in four of the LTF sites, ranging from operational (False Island and Corner Bay) to alder-covered (Oly Creek, Inbetween Creek, and Crab Bay need to be cleared). A sort yard proposed at Oly Creek has not been constructed (applicable to alternative E, not C).

Camps:

A total of five camps will be considered in the plan, depending on the alternative implemented. These would range from floatcamps to land camps.

Stream crossings:

At the time the State reviews the stream crossings for consistency with the ACMP, DFG would use four levels of information in their analysis for ACMP consistency and compliance with Title 16 for anadromous fish stream crossings. We have indicated recent agreements between the USFS and DFG for cooperation on anadromous fish stream crossings concerning the various measures. USFS adherence to these measures will ensure ACMP consistency and help resolve the State's concerns for the protection of fishery resources:

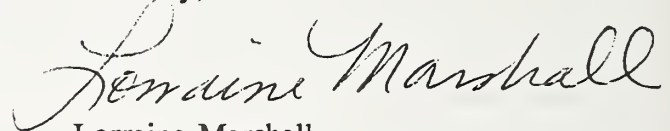
1. The structure must be designed, installed, and maintained to accommodate the efficient passage of fish, both upstream and downstream, at all flows up to and including a mean annual flood design discharge with a two-day duration. (This standard is satisfied by the USFS's intent to provide fish passage.)
2. Alteration of streambanks must be minimized and restricted to that necessary for the stream crossings. Disturbed streambanks must be immediately stabilized to prevent erosion and sedimentation of the stream. (USFS compliance with BMPs 12.7, 14.5 and 14.8 will satisfy this requirement.)
3. Authorized activities must avoid sensitive life stages. DFG may restrict or prohibit activities during sensitive time periods as necessary. (DFG should be consulted during field layout on uncertainties related to fish timing requirements.)
4. The installation must be conducted in a manner that maintains fish and wildlife and their habitats. (For sites with spawning habitat, DFG requires open bottom structures which do not constrict the stream channel. The USFS can comply with this standard through consultation with DFG during the project planning/layout phase when site-specific habitat determinations can be made.)

GENERAL ADVISORIES

Page-specific NEPA comments offered by DFG are in enclosure 1, and comments on subsistence are in enclosure 2.

DFG and DEC advised that many of the unit and road cards in the DEIS are incomplete at this time, making a meaningful analysis impossible. Both departments are deferring specific comments on the unit and road cards until the FEIS is reviewed.

Sincerely,



Lorraine Marshall
Project Review Coordinator
SE Consistency Review Section

Enclosure: Sitka comments
CPQ
Federal CZM regulations

cc: - Dave Hardy, DFG, Sitka
- Rick Reed, DFG, Juneau
- Jim Ferguson, DEC, Juneau
- Daryl McRoberts, DNR, Juneau
Steve Jacoby, DGC, Juneau
Paul Rusanowski, DGC, Juneau

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ENCLOSURE 1

DFG PAGE-SPECIFIC COMMENTS

pg. 2-31, paragraph 2 -- Mitigation measures. It is inappropriate to say the effects from logging camps "will be mitigated" by Forest Service or ADF&G actions prior to those actions taking place. The assumption is that the actions will be successful. However, even the mitigation is a proposal to communicate with logging camp residents rather than a commitment to undertake specific action. The best that can be said is that the USFS hopes that the mitigation actions it plans will reduce the likely impacts of development and human activity on brown bears.

pg. 2-32 We are pleased to see that no beach fringe, estuary, or riparian wildlife habitats are proposed for harvest under the preferred alternative. We hope that also will be the case for the alternative or combination of alternatives chosen in the ROD.

pg. 2-47 The assumption that validation monitoring is the responsibility of the regional office of the Forest Service is a continuing problem in which each FS management level passes the responsibility to another. One unfortunate result is that the activity may never get done or is done at a minimum reporting level. Some assumptions and models have been developed through research at the regional level, but they are applied differently for each timber sale. An example is: the methods used for determining timber volume of harvest units and selecting retention areas for wildlife. Who will monitor the wildlife retention areas in this sale to see if they are protecting wildlife values? Realistically, we do not expect regional office staff will be concerned with monitoring retention areas on this part of Chichagof to see if model predictions of habitat capability changes are accurate. Validation of the applications of the models and assumptions used by each project should be the responsibility of the Area and/or District in which the project occurs, as well as follow-up by the regional office.

pg. 2-47 ff. Implementation monitoring. We appreciate seeing a more detailed monitoring plan presented in the DEIS. However, we wonder why only 20% of stream buffers, cutting units with wildlife concerns, and water quality sites will be checked. This seems far too low to insure compliance. In addition, most plans allow 10% variation or deviation between plan targets and implementation. Why allow any deviation from stated resource protection goals?

pg. 2-52 ff. Effectiveness monitoring. Proportion of timber harvest section -- we question whether the TIMTYP database is the appropriate one to use for monitoring proportionality. See general comments.

Road use Post-sale -- Measurement plans appear to overlook the possible use of snow machines on roadbeds during the winter trapping season, November-March. Inspections of these road systems should also be made in winter to check these effects.

Stream buffers -- The evaluation section appears to allow buffers to vary as much as 10% from the prescribed width. Again, why allow any variation from prescribed buffer width, especially one mandated by law?

Wildlife, deer -- The evaluation section should be changed. The assumption that weather alone can be defined as causing declines in wildlife renders this monitoring program relatively meaningless. Timber activities exacerbate the effects of weather by removing shelter and thermal cover and by removing canopy that would keep forage plants from being buried by snow.

pp. 3-37 ff. The wildlife, affected environment, section is generally good, containing much useful and relevant information. Notably missing however, are the ADF&G Deer Population Objectives. Although we recognize the objectives are not minimum mandatory standards, they should be presented in the impact analysis as an indication of ADF&G's estimation of what is necessary to meet deer hunter demand.

pg. 3-47, second para. The statement that deer feed on seaweed in winter implies that seaweed is a viable form of nourishment "when most of their preferred browse is unavailable". In fact, only deer that are starving eat seaweed, and that is as a last resort. Seaweed can not sustain a deer and it is certainly not an alternative to forested habitat. That line should be deleted.

3-68ff. General discussion of subsistence is much improved over previous EISs. The summary in Chapter 3 provides a good regional overview of subsistence and is sensitive to the complexity, diversity, and importance of subsistence lifestyles and economies in southeast Alaska.

3-69, second paragraph. It is incorrect to suggest that Goldschmidt and Haas only identified land-use patterns pertaining to the mid-twentieth century. Goldschmidt and Haas mapped and described areas of aboriginal use and ownership and historic and contemporary use areas to 1946.

3-69, last paragraph. In addition to the territory of the Wucitan (Wooshkeitaan) and Kaukweidi Tlingit clans, the project area falls within the traditional use areas of the Decitan [Deisheetaan] (took over Ganaxadi territory in Sitkoh Bay) and Teokwedi [Teikweidi] (Peril Straits area) and possibly other clans which were localized in Tenakee Inlet.

3-81 and 3-82, Table 3-43. Column heading WAA 3639 should be WAA 3630. Also some of the mean harvest calculations for this column appear to be incorrect (Ketchikan should be 4, not 2, Juneau 11 not 18, etc.). The word "Use" should be eliminated from Tables 3-43, 3-44, 3-45 as use implies hunter effort, not actual harvest; harvest is what the numbers in the columns represent. Figures for hunting effort are measured in days and are available from ADF&G. Many hunters use areas but do not report harvesting deer on ADF&G hunter surveys. Similarly, the word "importance" in the title and column heading of Table 3-45 implies more than the figures for average percent of community harvest actually convey. The figures in this table merely reflect the composition of the deer harvest from a harvest survey; measuring the importance or relative importance of deer harvest by WAA is something local communities need to help define.

3-83, third paragraph. It is correctly reported that Angoon residents harvest 74 [edible] pounds of deer per capita. If Angoon has a population of 540 residents and it is assumed that a deer has roughly 80 pounds of edible meat, this means that Angoon residents harvested some 500 deer in 1987. A study by the Division of Subsistence (see George and Bosworth 1988) estimated the average annual Angoon deer harvest between 1984-1986 to be 525 deer. It is important to note that these estimates are as much 50-100 percent higher than estimates generated from the ADF&G deer hunter surveys for the same period. Our evaluation of the data suggests that these discrepancies are attributable to poor response rates and other factors affecting responses to the deer hunter surveys (see George and Bosworth 1988:80-82). This underscores the need to use the deer hunter survey with caution, and to incorporate other sources of deer harvest data, including TRUCS and Division of Subsistence community studies.

3-104. The section on roads is weak. Our data suggest that ATVs are used extensively in some areas, such as Sitkoh Bay and Corner Bay. The DEIS indicates "ATV use may occur; however, the Forest service currently has no data which would indicate where ATVs are used". We recommend that the FEIS incorporate our information, and further that ATV use be monitored in the project area.

pg. 4-42 and 4-43 Second column of table 4-37 appears to be mislabeled. From the narrative on the preceding page, it seems it should read "2000". Likewise, when compared to narrative, it appears the first two columns of table 4-38 should read "Acres in 1961" and "2000", respectively.

pg. 4-73 We hope the definition of streamside riparian used in the DEIS is the scientific one. From the wording on this page, it appears a more legal definition is being used, ie. one meaning only the 100 feet making up the TTRA buffers. As discussed in the USFS Channel Type Handbook, riparian habitat width and

appropriate prescriptions for development vary a great deal according to the characteristics of the affected stream reach.

pp. 4-80, 4-82 In the discussion of effects on both brown bears and martens it is stated that impacts of logging camps and roads will be minimal if roads are closed (emphasis added). The misleading impression given is that roads will be closed. However, according to the road management objectives, practically no roads will be closed in the preferred alternative. Roads and human disturbance greatly affect brown bear habitat capability. Because roads are not slated to be closed, the impacts to brown bear habitat capability from human disturbance, habituation, vehicle access during and after the timber harvest period should be displayed in the EIS. Roads are also a great concern in regard to marten. The EIS should note that during the three years or more of timber harvest activities impacts to marten populations from road access and trapping by logging camp residents can be substantial. Without road closures, the use of snow machines by trappers can also affect marten populations. Monitoring effects of roads on marten should include winter use of roads. We recommend that the FS involve local communities and the state in an active program to mitigate impacts through road management.

pp. 4-101 ff. We are disappointed to find that the effects on Juneau and Ketchikan hunters (non-rural hunters) are given little attention either in the wildlife, environmental consequences section or the subsistence section. If the proposed actions have a significant possibly of a significant restriction of subsistence use of deer as stated on pg. 4-151, then the consequences of that situation to Juneau and Ketchikan hunters should be displayed clearly and prominently in the DEIS. As the DEIS points out elsewhere, 8% of Juneau's deer harvest comes from the project area. Juneau hunters take more deer from the area than those from any other community, and non-subsistence hunters account for over 40% of the average annual harvest of deer in the area. Clearly, regulation changes to deal with restrictions to subsistence use would have a dramatic effect on non-rural hunters. The EIS should deal with this possibility openly and forthrightly.

pg. 4-102 last para. First sentence should revised and clarified.

pg. 4-106 Sentence on thinning second growth in third paragraph is also not clear.

We are pleased to see this DEIS refer to the Habitat Conservation Areas of the interagency committee on viable wildlife populations. We are pleased the importance of such areas has been acknowledged in this document. DFG recommends that the areas shaded as old growth acres in Habitat Conservation Areas depicted in figure 4-2 should be checked to see if they meet the criteria of HCA's proposed by the interagency committee. (A report, drafted by the committee, is presently undergoing review. Some of the shaded areas appear to include areas of extensive clearcutting.

4-125. The section on abundance and distribution seems to downplay project effects on WAAs 3309, 3629, and 3630 by stressing that these WAAs are already harvested at levels greater than the current population can sustain. The fact that these WAAs are already in danger emphasizes the need to avoid further decline in habitat capability where possible and should not be used to minimize or rationalize the additional impacts that this project proposes. Such statements are found throughout the subsistence section.

4-126. The explanation of Table 4-88 is confusing. The coded bars do not show percent of WAAs harvested by rural and non rural communities, but rather portions of the total deer harvest taken by different groups.

Figs. 4-4 through 4-9 give J. Kruse 1992 as their source. No citation for J. Kruse 1992 exists in the literature cited section. "Habitat capability" should be substituted for "carrying capacity" in the note for these figures. First sentence in narrative has an error: Table 4-88 shows percent of deer, not percent of WAA's harvested.

4-127, Fig. 4-6 is mislabeled: WAA 3327 should be 3627.

4-134-38. This kind of mapped analysis, which overlays community subsistence patterns with proposed actions, should be required of every EIS. This is the only way that communities can evaluate the impacts of each alternative.

4-139, Table 4-91. This data is potentially misleading. The underlying premise here is, "the less direct overlap between lands used for subsistence and those used for timber harvest the better." Although this seems logical, in fact ecological relationships are much more complex than this. Just because most subsistence deer hunters harvest in the coastal zone and not in the upland areas, does not in itself mean that these hunters will not be affected by activities in upland areas. It is the old growth timber in these upland areas which provides the critical habitat needed to maintain the deer supply. Thus, upland timber harvesting has the potential to significantly impact coastal zone deer harvest opportunities without there being any direct overlap between the two sets of acreages. Given this, the figures in this table require more explanation and the justification and limitations of this kind of acreage analysis should be clearly stated.

4-154, Access. We are pleased to read that "Roads will be managed to prohibit use of vehicles, including ATVs, if monitoring indicates unacceptable impacts to subsistence." But how will the use of hundreds of miles of roads be monitored or regulated? How will "acceptable" or "unacceptable" impacts to subsistence be defined and regulated? 810 hearing testimony from communities affected by this project indicates that 1) many do not favor roads for access and 2) the introduction of roads has led to increased competition and depletion of resources in some areas. We

would be pleased to work with the planning team to develop the monitoring and mitigation details prior to the FEIS.

4-154, Competition. The statement that, "Increased competition could occur from logging camp residents," is an obvious one, but have the impacts of logging communities (especially those established in remote wilderness areas) ever been monitored or realistically assessed by the Forest Service? Many residents of rural communities have testified to the impacts of logging communities on the environment and subsistence. This testimony has been documented in Forest Service hearings and should be acknowledged in the EIS. Monitoring and mitigation measures for competition from logging communities should be clearly addressed in the EIS (see also general comments on mitigation above).

4-155. The statement that "The Project Area's remoteness makes it very unlikely that an individual household or even an entire community is highly dependent on specific areas within the Project Area that may be affected by proposed actions" is unfounded, unsubstantiated, and contradicted by the EIS's own findings with respect to Tenakee Springs. Tenakee and Angoon residents do not consider the project area remote; in fact it encompasses substantial portions of their traditional use areas. Many Southeast communities are dependent upon resource areas which are not within their immediate vicinity. Physical distance is only one of many factors which influences subsistence patterns. The statement should be eliminated.

4-156. The findings on deer should be reiterated under the Resource Findings section; otherwise the category "Other Resources" in Table 4-96 could be (mis)interpreted to include deer. The fact that the deer findings are disaggregated from other wildlife makes the DEIS conclusions hard to follow.

4-158. The reasoning presented here for why the project is necessary and consistent with sound management of public lands is not compelling. Why not choose other lands where the project's impacts on subsistence would be fewer, or define a broader range of alternatives? (see general comments under Issues 1 and 2).

pg. 4-161 Table 4-88 does not illustrate road projections.

pg. 4-198 The spelling "consistence" does not appear as a word in the dictionary. It should be corrected from the fourth paragraph on this page.

ENCLOSURE 2

SUBSISTENCE ISSUES AND CONCERNS

The Department of Fish and Game offers the following comments on subsistence.

This document provides the most complete analysis of subsistence uses and likely impacts to those uses that we have seen in a USFS planning document to date. The DEIS includes more complete subsistence baseline data and advances better analysis of subsistence impacts than has usually been the case with planning documents of this genre. The planning team should be commended for committing adequate professional staff to subsistence sections and for the competence with which this staff presented and analyzed subsistence impacts.

The Division of Subsistence was able to work closely with the planning team on this timber sale. We received some support from Forest Service to assist in area analysis through the Tongass Subsistence Studies project. Dr. Jack Kruse, Institute for Social and Economic Research, was part of this effort under contract to the Division of Subsistence. Because we had significant contact with the planning team, many of our subsistence concerns were addressed before issuance of the DEIS. As time permits, we are willing to do further work with the team before issuance of the FEIS.

A. Overview

The main tasks of an EIS are to:

- 1) review existing data and describe subsistence uses in the project area;
- 2) estimate the project and cumulative impact on subsistence uses; and
- 3) meet ANILCA, Section 810 requirements.

We believe that the DEIS has done a thorough job of describing subsistence uses and in estimating some of the impacts to subsistence uses. A number of issues or problem areas, however, need to be better addressed in the FEIS. These are:

1. selection of SE Chichagof as a project
2. consideration of project alternatives
3. treatment of SEIS timber
4. Section 810 determinations and requirements
5. cumulative effects forest wide, WAA maps
6. mitigation of subsistence impacts
7. subsistence monitoring

B. Issues

1. **Selection of SE Chichagof as a project:** The selection and scheduling of this project does not appear to have been influenced by subsistence consideration. Scheduling of this sale is discussed at 1-13 with more detail provided in Appendix A. The area bordering Tenakee Inlet and, along with the area along the Hoonah road system, has been one of the few areas in Game Management Unit 4 where demand for deer regularly exceeds the supply. If minimizing effects on subsistence were a scheduling goal, Southeast Chichagof might not be scheduled for logging as long as other areas are available for logging where subsistence impact might be less.
2. **Consideration of project alternatives:** The alternatives were developed along very different themes, and the DEIS did an excellent job of following through on the stated themes. Alternatives B through F, the action alternatives, however, call for a range of harvest of 108 to 137 MMBF. This range may not be sufficiently broad enough to include *all reasonable alternatives* as intended by NEPA. Since subsistence impact is often proportional to the size of the sale, we would like to have seen alternatives considered that call for significantly smaller harvests.

3,485 acres or roughly 100 MMBF (at 30,000/acre) of recently released timber covered by the SEIS will also be logged over the next few years in the project area. Actual logging activities that will take place in the area over the next few years do not vary a great deal under the action alternatives.
3. **Treatment of SEIS timber:** While we recognize that SEIS timber harvest in the project area was subject to earlier EIS treatments and extended court review, the DEIS needs to better describe harvest of SEIS timber and possible effects on subsistence activities of this timber harvest. SEIS logging is likely to be attributed by the public to the Southeast Chichagof project. Specific on-the-ground activities may take place in conjunction with SE Chichagof Project activities and thus need to be considered.
4. **Section 810 determinations, and requirements:** The DEIS does an excellent job of examining impacts of past, present, and planned logging activities on deer habitat and deer supply. This analysis shows the level of deer harvest for each WAA by community, decrease in habitat capability over time, and likely impact on communities' subsistence use over time. Figures 4-15 through 4-24 include depiction of cumulative impacts under conditions of further logging and conservative human population growth and associated growth in demand through year 2040.

The Section 810 determinations are presented in table 4-93. These determinations appear to be based primarily on figures 4-15 through 4-24, and

on limited discussion in the text on competition. While table 4-93 does show that significant restriction may take place, we suggest that project and general impacts to subsistence uses be disaggregated and that both general community significant restrictions (as shown in 4-93) and site specific significant restrictions be shown. The following points address these suggestions:

- a. The DEIS at table 4-93 and in the text shows that a significant restriction may occur from the a1/a2 no action alternatives. This is confusing and makes the phrase "no action" appear to be a misnomer. What is going on here is a confounding of effects of past and non-project future logging with the effects of this particular project.
- b. Figures 4-5 through 4-9 show habitat capability, harvest demand, and effect of logging under conditions of planned logging and conservative growth in human population and demand. These graphs (and tables appearing elsewhere in the text) show that deer supply may not be sufficient to meet subsistence demand in the future (or at present) in some WAAs. These figures should provide the basis for a set of 810 determinations.

In order to be clear and to make site specific 810 determinations, the FEIS should include 4 short tables that replace table 4-93. These would show:

- a. Significant possibility of a significant restriction of subsistence use of Sitka Black-Tailed Deer from Project Activities for Project Area by Community.
- b. Significant possibility of a significant restriction of subsistence use of Sitka Black-Tailed Deer from Project Activities by WAA and by Community.
- c. Significant possibility of a significant restriction of subsistence use of Sitka Black-Tailed Deer from Project and Other Forest Management for Project Area by Community (this is the existing table 4-93).
- d. Significant possibility of a significant restriction of subsistence use of Sitka Black-Tailed Deer from Project and Other Forest Management by WAA and by Community.

5. **Cumulative effects forest wide, WAA maps:** The DEIS determinations presented in table 4-93 and the community effects shown in figures 4-15 through 4-24 are supported by tabular data presented in appendix E. The document could improve presentation of cumulative effects forest-wide by including discussion of long-term forest-wide effects and by including GIS products showing changes in habitat capability, subsistence deer harvests, and other forest-wide analysis in the body of the text. The Division of Subsistence has draft mapped products that will help in this area.
6. **Mitigation of subsistence impacts:** Mitigation of subsistence impacts need to be more explicitly identified. At page 2-31 *mitigation measures that protect or enhance fish and game resources will also protect and enhance subsistence activities*. While this may be generally true, we believe that the document should identify and state mitigation measures incorporated in the preferred alternative and additional mitigation that may be indicated to protect subsistence uses. Examples of mitigation incorporated into the alternative would include siting considerations that avoid LTFs or roads in intensively used subsistence use areas, avoidance of areas used for subsistence salmon fishing or marine invertebrate gathering. Additional mitigation that might be indicated would include: specific regulatory proposals to the Federal Subsistence Board to change seasons or bag limits, restrictions on road use for deer hunting, etc.
7. **Subsistence monitoring:** Monitoring of subsistence uses would be part of the monitoring plan 2-45 through 2-56. This monitoring should receive similar treatment to other monitoring activities.

Appendix D

Subsistence Hearing Testimony



Alaska National Interest Lands Conservation Act (ANILCA)
Section 810 Subsistence Hearings
Alaska Pulp Corporation Long-term Timber Sale Contract
Southeast Chichagof Draft EIS
SITKA, ALASKA
June 15, 1992

Greg Poremba, Hearing Officer: This is public hearing to obtain comments and testimony regarding the Southeast Chichagof Draft Environmental Impact Statement for the Alaska Pulp Corporation Long-term Timber Sale Contract, in case you're in the wrong room, wrong place. My name is Greg Poremba. I have been designated by the Forest Service to be the hearings officer tonight and this is Peter Carr who will be operating the tape recorder and taking notes in the event the tape should fail and receiving your written comments, and so forth.

We appreciate your interest in being here and we want to assure you we want to listen to whatever comments and suggestions that you have. They will be recorded as I said and will address the comments and the Final Environmental Impact Statement. The comments themselves will be included and we will also be responding to those comments. Just for the record today is June 15 and we are in Sitka, Alaska at the University of Alaska Southeast Hall. The meeting was published or notices that were published in Alaskan newspapers such as The Daily Sitka Sentinel and letters were sent out to individuals and groups. The main purpose here is to again get your comments on potential affected subsistence uses and users of the SE Chichagof Project Area of the Tongass National Forest. We do have a signup sheet at the door. I'd like to make sure that everybody is signed in, if you will. And we'd also like to make sure that you provide us your full address and clearly indicate your name because one of the things we'd like to do is take the testimony when we got it transcribed and send it out to everybody on the list so that we can let you read your comments and the comments everybody else made and revise them in the event somebody had a hard time hearing them on the tape. Related to that, we would like to make sure you speak pretty clearly into the mike. They'll pick up from a distance so don't worry about that. You may provide written comments either tonight along with your comments or you could send them into the U.S. Forest Service. We have written comment forms in back to do that. The closing date for comments is June 26, so please try to get them in by that date.

This afternoon we did have a public meeting, an open house to answer questions to provide information that was held from 3:00 - 6:00, so if you have questions, we kind of like to limit answering those at this time if at all possible. With that I'd like to open up the floor for people that'd like to make comments and just whoever would like to step up. We won't go by the list.

Sir, I believe you'd like to make some comments?

Mark Jacobs: Is there an Ed Baker ahead of me?

G. Poremba: We've decided to go more informally and not use the signup sheet if that's OK.

M. Jacobs: Can I do it from here?

G. Poremba: Well, if you could move a little closer to that seat that'd be nice.

M. Jacobs: I usually falter when I try to read my own testimony.

I would like to make some opening remarks

G. Poremba: If you could introduce yourself that would help.

M. Jacobs: . . . raise my voice a little bit. . .

G. Poremba: If you could give us your name and affiliation.

M. Jacobs: I would like to make references to the name of Chichagof. The name of Baranof Island is Shee. That's in Tlingit language. Shee Ti Ka means "the outside of Chichagof Island." That's where the name Sitka comes from and in reference to Chichagof, even though Russians name it Chichagof, it's a name that's very similar to the Indian name for Chichagof. I mentioned Baranof Island is Shee. Sheet Ka means off-set from Baranof Island. So the name of Chichagof is Shee Ka. It sounds very similar to Chichagof, but probably the name that the Russians used to identify Chichagof Island. I would also like to make reference my friends to Hoonah Sound. Hoonah Sound is called She kaX ich. Again it makes references to Baranof Island and Chichagof Island and indentation in that particular island.

To start off my testimony, I would like to try to read it and comment all the way along. Thank you, Mr. Chairman for this opportunity to express my views. My name is Mark Jacobs, Jr. resident of Sitka, Alaska. My mailing address is Post Office Box 625. My phone number area code (907) 747-8168. I am an Executive Committee Member of the Central Council of Tlingit and Haida Indians. The tribal government we are in charge of our tribal government affairs when a General Assembly is not in session. I'd like to inject here a statement that Bob Willard could not be in attendance because of the governor's calling a special session today. Also Ed Thomas that usually travels to this kind of hearings will be not be here either. They are right now are concentrating on the governor's special session. I don't know if Bob Loshcher will be coming or not, he is probably also tied up in that particular important session.

Tlingit and Haida has an enrollment of about 18,000 members and that's including the children. Although the voting membership is much smaller. It is understandable that building many miles of logging roads is necessary for transporting logs to the log dumps. The proposal to build 67 miles of roads will again revive some objections from nearby villagers who are impacted by hunters using ATVs. I believe that the Alaska Department of Fish & Game is also concerned as far as impacting the brown bear population. And they made that statement in their hearings here. These logging roads also intensify hunting and trapping activities. Fish and game also contend that marten population is down. It has been reported that some of these hunters take only the hindquarters—probably none of your business but that's what happens; leaving the rest of the carcasses to rot. I think the roads itself has little or no effect on wildlife population, but the easy access for motorized hunting is detrimental mainly to the deer population and severely impacts the villagers who hunt by hiking. I'm not saying that the villagers don't have ATVs, but a lot of those people don't. They only depend on hiking and not ATVs—can't afford it anyway. I personally don't have any problems with the log dumps as they presently exist. I do object to Unit 246. I noticed that it is shaded in the EIS summary statement. You may recall how a large number of Sitka residents opposed any and all logging proposals in Hoonah Sound. I didn't put this in here but I feel that anything that goes beyond Broad Island is we would consider it as an encroachment into logging Hoonah Sound. Maybe I better just leave this aside and file with you. Much easier for me to express myself when I'm not reading it.

Unit 246 at the upper edge is a camp that my family used to use. We used to go there to smoke fish after the main summer's commercial fishing, after the canneries have closed. The name of that camp and I'm sure you can find or an archaeologist can find the evidence. The name of the place is Wat tuh teen and is at the far edge up toward the edge of Hoonah Sound, the far edge of Number 246. My earliest childhood remembrance is at fish camp. The very first fish I ever gaffed was in that camp. The creeks are very small. They are mainly coho fish camp. Coho has a habit of utilizing even the smallest streams and if anadromous fish uses some of these streams, I am sure your regulations class them as Class I streams. And any side streams that feed into those streams I am sure is considered as subject to 100-foot buffer zones. I also made references to Sitkoh Bay and Kook Lake. Those are very important sockeye lakes. I've made several testimonies on the effects of Sitkoh Lake logging. My feeling in this

particular lakes is that 100-foot buffer zone is inadequate. I feel that the whole drainage into the lakes would have severe effect on the sockeyes. My previous testimony on the water temperature rising in these lakes. I don't know if the man was a biologist or what he was, but he assured me that warmer water enhances the growth of sockeye salmon. Over the years what I've noticed is that the sockeyes began to diminish. We used to be allowed 50 sockeyes and we didn't have permits at that time, and used drag things and gaff hooks.

Sitkoh Lake is a major sockeye stream. Canneries in the area used to get their sockeyes from Sitkoh Bay and Basket Bay. Chatham we called Sitkoh Bay. Chatham is more a name that I am familiar with. The people from Sitka, Juneau, Tenakee Springs, Angoon used to move to the canneries. The canneries are Todd Cannery, Tyee, Hood Bay, Superior Packing Company located close by, that these villagers used to move their families to work in the cannery. And it was inevitable that most or more than half of these families had smokehouses; some of the smokehouses were shared. I estimate the size of an average smokehouse to handle anywhere from 40 to 50 sockeyes. I know the larger ones handled between 80 and 100 sockeyes to be smoked and dried at one time. And this used to be a rotation thing, when one family gets satisfied with their supply another family would start using the smokehouses. Along with that there was some poachers, commercial seiners. As kids we used to observe these night time poachers that used to go into that river and take boat loads of sockeye out of the bay. Sockeye was desired because it was the highest priced fish. I only mention this because this was a heavy impact of use of Sitkoh Bay. There were no canneries in Basket Bay so we couldn't observe what's going on there. But in spite of that the returning run was stable until Sitkoh Bay was Lake was logged and the temperature begin to rise, and the slash, sawdust and bark began to decay and the water in the lake began to get warmer. If you took a look at Indian River you'll notice nice gray gravel on the riverbed, that's the way Sitkoh Lake used to be and Sitkoh River, Sockeye Creek. We used to stay in the river and never hardly use the trail. Each person would have a 24-thread line and we'd lash sockeye salmon with a rope and we'd float the salmon down the river instead of pack them on the trail. What I noticed in recent years is we couldn't do that. And I attribute all this slime and algae that developed in that riverbed was because of the temperature of the water rising. Temperature rose because of logging around the lake. The drainage was exposed to open sky and much warmer water entered the lake than what would have stayed cool if the place was not logged at all. For that reason I recommend that there be no logging around Kook Lake, Lake Eva, and Sitkoh Lake should be allowed to regrowth without any further logging. They are very valuable. I think if there is any reseeding done too I would kind of discourage fertilizing the new seed to enhance the growth. I feel that some of that fertilizing would drain into the lake and I don't know what all effect it would have on the smolts or even eggs. I'm not speaking as a knowledgeable person from this point of view but I would like better answers before I would recommend fertilizing. I think fertilizing the lake. I'm talking about two different things when I'm using the word fertilizer. Fertilizing Redoubt Lake is I think to provide nutrients for the sockeye. When the Forest Service fertilized Redoubt Lake, has been very effective as far as I could see. The return of the sockeyes was beyond expectation as far as I could see. Then a proposal was made for Sitkoh Bay to do the same thing. It also included constructing a weir for fish count. Southeast Native Subsistence Commission opposed fertilizing Sitkoh Lake and Kook Lake and also the construction of the weir.

Originally I was in favor of fertilizing for providing nutrients. But what I was told by and what we discussed in our meeting in the Southeast Subsistence Commission is that because federal money is used for fertilizing and building, and I think even a hatchery was proposed, other user groups wanted a piece of the pie and a piece of the cake. In other words, if you are going to fertilize Sitkoh Lake and build a hatchery there, use weir for counting and then the fish begin to multiply by leaps and bounds. Seiners and gill netters do want a piece of that cake. In depletion of Sitkoh Lake and the river and the whole Bay, Sitka residents were severely impacted. Angoon residents were reduced in their daily bag limit. Eventually Sitka was completely eliminated. A cut in sockeye bag limit to 10 fish is not subsistence at all. The amount of money that it would take to run that distance to get this highly desirable fish would cause us to expend a lot more on gasoline and time and effort. So even though it's part of our traditional food, and our traditional resource, it cannot be termed as a subsistence resource because of the cost involved in harvesting it.

In my statement I did favor Alternative E or F. I did all my studies in this very limited time I have been traveling a great deal. In fact I just got off the plane today. In spite of that I had my testimony typed up and I'll leave it with the secretary.

G. Poremba: Thank you.

M. Jacobs: In doing more studies if I find some of these alternatives may be a little bit better. I may go for some other alternative. If you don't hear from me, I'll stay with E and F. I view this as the liberal amount of board feet allowed and still preserve the scenic view, be out of sight. But I do object to going anywhere beyond Broad Island. There is another proposal that I heard and I don't know what the details are yet and that's on Ushk Bay. I am working on my testimony on that and I will probably mail it in if there won't be a hearing set aside for that particular proposal. I think it's a floating facility for study of roads and cutting, I'm not sure. I think I saw a little bit of article in the paper on that. I'd like to know more detail on that. But in Hoonah Sound area we have a lot of fish camps. Our people have applied for allotment. The regulation in acquiring those allotments is under the Indian Allotment Act of 160 acres. The Bureau of Land Management when they receive an application, immediately refer it to the Forest Service for comment. The Forest Service sends it back and they approve all but one-third acre or one acre or two acres or whatever their discretion is, and I think Herman Kitka got four acres. I would like to see the full entitlement of 160 acres and that Forest Service withdraw its objections to those applicants that are still waiting. My dad applied for 160 acres at Wut tuh teen. I think I can give you the latitude, longitude in degrees, minutes and seconds to pinpoint the exact location of where our log cabin, our smokehouse and our tents used to be. The families that used to use Wut tuh teen is Philip Jones family, my grandmother, Mrs. Robert Lawrence, my family, Widmark family and also Richard Peter's family. This is all the people that used have a small community there after fishing, so it was quite an important fish camp to supply us our winter food. We knew nothing about public assistance. We knew . . . and very little bit of employment. It was very important. Now when a person is brought up in this manner they become acculturated to their food. And that's exactly the way I am. In spite of the modern freezers, modern canning methods, and pickling and others which I don't call traditional methods, customary methods. A cultural way of preserving food is what I am acculturated to. I smoke my meat. I immerse it in seal oil for preservation. It doesn't need refrigeration. Before we had refrigerators and before we had freezers, before we had canning methods, and even brine salting was introduced by the Russians. Before these modern methods of technology was available to us the old method was important. Complete dehydration, complete smoking, our smokehouses that the Forest Service told us is unlivable, full of air holes, even called it a trespass and a blight so they chose to burn them down. And that was before any kind of land claims legislation.

When we entered our Tlingit and Haida suit, the Forest Service was named as a trespasser along with other executive orders that were made. I think I better quit before I get carried away. I think I'm pretty familiar with some of these things that we have suffered. Here is my testimony that's written. I went beyond what I have written there. I think it's taken into account the economic importance of the pulp mill and the workmen out there and at the same time protecting our interest. When Hoonah Sound, I had no part in it when Hoonah Sound was proposed for logging. It generated Friends of Hoonah Sound, and in other words, non-native communities were interested in Hoonah Sound because of its highly recreation, considered very scenic in addition to subsistence importance. But at the same time we didn't want the Bay set aside as a monument or a game reserve or a park or anything. Because we don't want the place shut down or restricted navigation because of whales spouting in there. You know what I mean with some of these extreme things that take place in this thing.

The Forest Service formed a panel on Hoonah Sound. I tried to get in on that. It was closed to me. I maintain that I represented an important segment of our society. I still didn't make it through two sources. The moderator was. . . I forget his name, it's on the tip of my tongue. . . Dr. Bovee, yea, he moderated that panel. I said I wanted to be on it and voice my opinion on it. In addition to whatever the Friends of Hoonah Sound had, but I was denied that right to be heard.

I appreciate this time. Thank you very much. I hope that you consider. I hope that you don't think I'm a on the warpath. I hope that you do consider the importance of subsistence and scenic beauty and recreational value of Hoonah Sound. I don't know what other communities will be. I am speaking on behalf of even. . . though I have in my testimony mentioned Tlingit and Haida Executive Committee Members and I'm also a member and I'm First Vice-president of the Southeast Subsistence Commission. Bob Willard is not here so I am speaking on behalf of SE Subsistence Commission also. Thank you.

G. Poremba: Thank you Mr. Jacobs. Again, we are not necessarily going by the sign up sheet. So if you wish to make some comments, feel free to step up now.

A. Lowe: My name is Ann Lowe. I am the Chairman of the Southeast Regional Advisory Council to the State and we didn't have a chance to look these over as a Southeast Council, so I am going to come here tonight to speak on my own behalf and it's going to be some input from the different committees that are involved in this area. Also as a member of the Sitka Advisory Committee I did have an opportunity to go over these alternatives with the Forest Service in a meeting which was sponsored by the Fish and Game Advisory Committee and I am very, very pleased with the results the Forest Service has come out with. The working relationship that they developed and the real desire to try to make sure that the public was informed and exposed to what was here in order to get more input.

I've known the Forest Service for a long time and have been involved in a lot of these things and I must say this is one of the best planning teams I've ever seen, planning team efforts. Congratulations to the Planning Team. You did an excellent job. You took the limited information that was available to you through this TRUC study and other things that you had and put it together in a very nice form. I've seen some of your planning books before and EISs before and this is one of the best I've seen. I really congratulate you. You've done a wonderful job and I appreciate the effort the Forest Service is making to change attitudes and to involve biologists and fisheries biologists, and soil scientists and everyone. It's a big change from the old days and I appreciate it.

I am in favor of Alternative E and the reason I prefer that alternative it looks like it is a good working compromise out of all the different opinions that were expressed. It doesn't put most of the logging effort too heavily into the Tenakee area. It doesn't impact Tenakee as severely as some of these do. It spreads it out. It doesn't concentrate any logging activities around major lakes. The one lake where you do have some within some distance there I see you have it as a helicopter show. I appreciate that effort to minimize the impacts. It doesn't run a road up the long from False Island along the shoreline there like they've been talked about. It doesn't put a log dump on the Peril Straits side; you use a floating facility. It looks like you have made every effort to address all the concerns that were given to you. There was some expression at the meeting this afternoon, at the open house this afternoon, that that road that comes across might be restricted to vehicle use, and I'd like to encourage you not to do that. That people do need an opportunity to have places to ride and to expand their hunting capabilities. I looked at the deer analysis. Cindy was very gracious is going over that with me, and helped me to understand the way she used her numbers, and there some concern express about from Tenakee people about Sitka people being able to come over to that side and putting extra pressure. And I just might say to the Forest Service that that is the perception that may never prove to be true. The wintertime I have a feeling that road will not be passable. The most impact that could happen would probably be in August and that's usually an Alpine hunt, so it may not be as much of an impact as you might think it would be. I'm impressed with the way you spread the units out so that I realize that you're going to come back in, eventually you are going to have to come back in and take other VCUs back in that area but it looks like you've done a really good job so I really support Alternative E and I'm really proud of the Forest Service and the progress you've made and want to compliment you on your video that you ran on the news to get people to come and just really want to say how much I appreciate you and how much you seem to be maturing—growing up. Thank you.

G. Poremba: Anyone else like to comment? You aren't going to let me go home early, are you? Does anyone just have some written comments that they would like to turn in rather than make a verbal comment? OK. Well, we'll sit here for as long as it takes. If anybody wants to make comments, we'll be here at least until 9:00.

**Alaska National Interest Lands Conservation Act (ANILCA)
Section 810 Subsistence Hearings
Alaska Pulp Corporation Long-term Timber Sale Contract
Southeast Chichagof Draft EIS**

HAINES, ALASKA

June 16, 1992

Three people attended the subsistence hearing in Haines, Alaska held on June 16, 1992. No one presented or submitted testimony.

**Alaska National Interest Lands Conservation Act (ANILCA)
Section 810 Subsistence Hearings
Alaska Pulp Corporation Long-term Timber Sale Contract
Southeast Chichagof Draft EIS**

SKAGWAY, ALASKA

June 17, 1992

Two people attended the subsistence hearing in Skagway Alaska held on June 17, 1992. No one presented or submitted testimony.

Alaska National Interest Lands Conservation Act (ANILCA)
Section 810 Subsistence Hearings
Alaska Pulp Corporation Long-term Timber Sale Contract
Southeast Chichagof Draft EIS
TENAKEE SPRINGS, ALASKA
June 18, 1992

G. Poremba, Hearing Officer: I guess we'd like to get started now if that's OK with everybody. We're having tonight's meeting to obtain comments on the Southeast Chichagof Draft Environment Impact Statement. We'll be back Tuesday night again because we had a request to make another appearance since, I guess, the trolling season opened up again for a couple days. So we'll be back I think 5:00 on Tuesday night and we'll be here at least until 8:00. You can spread the word, if people weren't able to make it tonight. My name is Greg Poremba. I have been designated by the Forest Service to be the hearings officer tonight and this Peter Carr who will be recording the comments that are made and will be accepting any written testimony if you have anything written you'd like to turn in. And also taking notes should the tape machine fail. The comment period is open until June 29th. You can submit written comments until then or like I said when we come back Tuesday night.

I'd like to thank you all for coming. We really appreciate your taking time out of your evenings to come and provide comments to us about the Draft EIS. Your comments are very important to us. They will be included in the Final EIS as part of an appendix and they will be responded to. Just for the record today is June 18 and it's about 7:00 and we're in the Community Hall at Tenakee Springs. As far as I know there is some mailing sent out to advertise this meeting and there is also some notices published in some of the Southeast papers. We're particularly interested in finding out what kinds of comments you might have about the effects of the proposed timber harvest units and the alternatives on subsistence use but we'll take any other comments you might have and if you have any information that you would like to have added to the files and considered for the EIS, we'd be happy to do that also. We do have a sign-up sheet and I think we've got everybody signed. If you haven't, please sign that. Indicate whether or not you want to give verbal testimony, I don't think we'll be so formal as to go down the list. . . just let you stand up here when the time comes to give us your comments. We also have written comment forms that you can provide comments on tonight or if you want to take the forms and send them in later, you can do that. When you come up to the mike, we'd like you to give your name and your group affiliation and speak clearly into the mike so we can get your comments.

We're going to have them transcribed and everybody that signs up will get a copy. We're going to send them out so that you can go through and make sure that we didn't misquote you in any way and then we'll revise the testimony based on that. We did have an open house this afternoon from 3:00 - 6:00 to answer questions and hopefully you were able to attend then. Otherwise, at this point, we're open for comments if anybody would like to step up and give us some of their input.

Bob Pegues: Yes, I'll be the icebreaker.

G. Poremba: OK.

B. Pegues: I'm Bob Pegues. I'm here representing the Tenakee Springs Fish and Game Advisory Committee. They've asked me to present to you a resolution, Resolution 92-03 was adopted the 12th of June by the Committee. The resolution concerning the availability of deer for subsistence use.

WHEREAS, it is mandated by the Tongass Timber Reform Act that uses other than timber be given equal consideration; and
WHEREAS, the ANILCA Section 810 subsistence evaluation for the Southeast Chichagof Project Area has produced a finding of a significant possibility of a significant restriction on the subsistence use of deer in the project area; and

WHEREAS, deer populations in the project area are already very depressed due to recent hard winters and habitat losses; and

WHEREAS, the subsistence use of deer is of extreme personal, social, cultural, and economic importance to the citizens of Tenakee Springs; and

WHEREAS, the proposed activities of the Forest Service in the project area will likely cause a drastic reduction in the availability of deer for subsistence use;

THEREFORE BE IT RESOLVED that any activities that negatively affect the availability of deer for subsistence use are totally unacceptable to the citizens of Tenakee Springs; and

THEREFORE BE IT FURTHER RESOLVED that the Tenakee Springs Fish and Game Advisory Committee requests the Forest Service to reinstate Seal Bay and Long Bay area to LUD II classification and expand the area to include Goose Flats and the head of Tenakee Inlet.

ADOPTED THIS 12TH DAY OF JUNE 1992 and signed by Samuel E. McBeen who is the Committee Chairman.

G. Poremba: OK.

B. Pegues: I'll have personal statements to make in writing before the deadline.

G. Poremba: OK, thank you.

B. PEGUES: Thank you.

G. Poremba: Anybody else like to make some comments?

G. Poremba: Feel free to sit down and the mike will pick you up fine.

B. Brown: I'm Brian Brown. I'm a resident of False Island and we'd like to, or I would like to. . . I'm not speaking for anybody but myself at this point. . . I would just like to recommend that the timber use, even though other uses are supposed to be given equal weight, timber use is by far affecting greater proportions of people, not just a handful of people in Tenakee. You know it's people in Sitka and Wrangell and all these logging camps that find timber a lot more important to their economic well-being than a few people that want to harvest large quantities of deer for their own personal use. So, we'd like, or I'd like to state that timber be given precedence over all subsistence use.

G. Poremba: OK, thank you.

G. Poremba: Anyone else? We'll be here for a couple hours so anytime you want to come up here and make comments, we're open to.

C. Mapes: My name is Tenakee Springs. My name is Craig Mapes and I'm representing myself. I just like to say that I'd like to recommend that subsistence be given a high priority and that Seal Bay, Long Bay, and Goose Flats be added to LUD II status to protect as much as possible in the inlet. I'd also like to say that I appreciate the Forest Service for coming down today and spending your time. Seems like we see a lot of new faces here every time. And we appreciate you coming out. Furthermore, I'd like to make a comment about the big-term picture of the economy in Southeast Alaska and the world economy. It seems to me that timber is an important resource. I use timber myself. I use paper products. And I see a real dilemma occurring with jobs for people involved, hard-working people, mind you, involved in the timber industry and other related industries throughout Southeast. And it looks to me like given the present rate of cut the same thing that is going on down in the lower 48 in Oregon and Washington is inevitable to happen in Southeast Alaska. I think if you look historically at the cutting levels that have gone on since the 1950s, there was a pretty long-term sustainable crop of timber here and at the rate that it's being cut now versus the rate that its growing now, it looks to me, and I think the Forest Service acknowledges this, too, and if people look at the big picture, it's not an unlimited resource. I firmly believe that if you took everything out of wilderness and just logged everything, and just went ahead on her, they could wrap up this resource just like they did in the, you know, when they first started logging in Oregon and Washington and Idaho and Montana it was limitless. And now they're fighting over scraps of the 10 percent that are left and, you know, we all know that trees grow back, but evidently they don't grow back as fast as we can cut them down. It's been shown.

I understand there is a need for jobs. What I'd like to see is a smaller scale, basically a selective cutting, small scale operations and high-value processing used in Southeast Alaska. We have some people here that are producing guitar tops and some high-value milled products from the timber here that is also providing jobs. And I'd just like to see a more locally based economy. We can't have it all. I understand there's a lot of people in mills in Wrangell and in mills in Ketchikan and logging camps, but the fact of the matter is that when the pulp companies are through with their 50-year contracts and they've cut as much as the allowable cut will allow them, and there is going to be a finite limit, whether it's locked up in wilderness or whether they cut literally the last tree left, and it only grows back so fast. At that point in time, there's going to be a whole lot of people out of jobs and we will have lost a real national resource here. So I think that it's going to take a balance and it's going to take a coming together and yea, we've got some areas set aside and I thank God for that because if we didn't, it would all be cut down. It's a real pleasure to walk through an old-growth forest and it's never the same. Big trees grow back, but it's never the same. So while we need a strong timber economy, I think that it would benefit the people in Southeast Alaska to go with the value-added locally based intensive production of fine wood products and wood utilization vs. shipping out cants to foreign markets. And then take the pulp and send it to the mill. But in time, you know, best case, there's going to be a lot of people out of work. I mean, and if you don't believe it, look at, you know, like I say, you got, they are blaming it on the spotted owl, but the fact of the matter is 90 percent of the trees are gone. They aren't there. You can fly over it and see it. You can look on the ground. They grow back. We've got some pecker poles alright, but the timber is just not there. And we've got a real valuable old-growth forest here. Six-hundred- and 800-year-old trees. So I'd like to see a more balance use and there are some people, granted, it's a small number of people versus the big picture, but there are people that depend on the resources here and they've chosen to live here, and I think they should have that right to have as much of the area left intact as possible. So I would recommend Alternative A which is basically no cutting at all and I guess that wraps it up.

G. Poremba: Thanks.

G. Poremba: Would anybody else like to make comments at this time? If you could give us your name and who you represent.

Diane Ziel: First, I'd like to read a statement for somebody else—Molly Kemp.

G. Poremba: OK.

D. Ziel: "I regret that I cannot attend this hearing and request that these comments be recorded. Release of the Southeast Chichagof DEIS and the comment period have coincided, as usual, with the busiest time of year for rural Southeast residents—reinforces the widespread perception that the Forest Service wants to minimize public participation.

"Although I have not had time to review this document in detail, a quick examination reveals that the basic contradiction in US Forest Service subsistence policy has not been resolved. The Forest Service has been forced to acknowledge that large scale logging operations have long-term negative effects on fish and wildlife. The language of ANILCA and other federal laws clearly directs management of the Tongass away from the single-minded emphasis on timber production. But when it comes down to management decisions the Forest Service still gives logging the highest priority, and passes off subsistence concerns by telling local people to exclude other users or go someplace else.

"Page 3-69 provides a description of subsistence and the clear direction in ANILCA that subsistence uses of renewable resources "shall be the priority consumptive uses of all such resources on the public lands of Alaska". That description is followed by maps and charts derived from the TRUCS Survey. Even a cursory examination reveals some glaring inaccuracies in those illustrations. For example page 3-77 "Marine Invertebrate Harvest" shows no use of areas (such as east of Graveyard Island) that are heavily fished for crab and excluded from commercial fishing because of their importance to sport/subsistence users. Another example is the map of "Salmon Harvest" (page 3-78) showing areas where "one or more households ever harvest salmon"—and which completely excludes Tenakee Inlet.

I was disappointed to find that the section on deer has no reference to the ADF&G "Strategic Plan for Management of Deer Population Objectives." That document gives a detailed analysis of the entire south shore of Tenakee Inlet and concludes that hunter demand already exceeds habitat capability.

"It's very annoying to find statements such as the last paragraph of DEIS Appendix A-11 which blithely assures us that Kadashan has so much "excess production" that it accommodate all the hunters displaced by habitat loss elsewhere. Evidently, whoever wrote that paragraph didn't read pages 4-141 which spells out the future quite plainly. Page 4-141 states that within the range of proposed habitat reduction there will be sufficient deer for subsistence use in Tenakee's primary hunting area through the year 2000, but insufficient deer available for both subsistence and non-subsistence use by the year 2010. There is a significant possibility of significant restriction of subsistence use of deer for Tenakee residence. I guess we're supposed to be grateful that the Forest Service has finally acknowledged that clear cutting negatively affects subsistence; however, the solutions to this conflict proposed on page 141 do not fill me with gratitude. The Forest Service requests or suggests restriction non-subsistence hunting which cannot occur until the population is already severely reduced or hunting somewhere else. In other words, "tough luck." APC comes first. I was very interested in the discussion of the APC contract on pages 4 and 5 which attempts to justify satisfying APC's appetite over all other considerations. I remember very clearly the USFS spirited defense of the long-term contracts throughout the debate over Tongass reform and the claim that we can have it all in the Tongass. What a difference it would have made if the Forest Service had gone to Congress with the truth—that every other value has been and will be sacrificed by the time the contracts have run their course. There is some interesting points made in the course of this discussion such as how the native corporations are selling their timber at prices higher than APC can afford while the US Government continues to prop up APC with federal appropriations legislation or the revelation that even British Columbia has a new policy as stated by the Forestry Minister, 'Our main objective is to use BC timber to manufacture wood products in this Province.' When the is the US Forest Service going to wake up and smell the pulp mill?"

D. Ziel: OK. This is for myself, Diane Ziel.

G. Poremba: OK.

D. Ziel: My name is Diane Ziel. I am a 16-year resident of Tenakee and my family and I are very dependent on the subsistence resources provided by Tenakee Inlet. My first point of business is to once again complain about the timing of these hearings. As with many other hearings the last few years this one has been set to correspond with one of the busiest times of year for the small rural communities. I have complained about the timing in previous years and I know many others complain also but once again, it is happening. I know of at least 15 Tenakee residents that cannot be here tonight for these hearings. The DEIS indicates that there is a significant possibility of significant restriction of subsistence use of deer for Tenakee residents. This is morally and legally unacceptable. ANILCA requires it, subsistence use has priority and NEPA requires that the Forest Service take a close look at a wide range of alternatives. This DEIS with it's all-or-nothing choices does not do that. We are given a chance to comment on No-action Alternative and several alternatives with high-volume cutting. Our choices are limited to the Forest Service's pre-existing plans which, as usual, favor the timber industry, APC, and the 50-year contract. The Forest Service needs to study and give the public opportunity to comment on plans that include timber harvesting in medium level ranges. NEPA also requires that the public be given opportunity for meaningful participation. The timing of these hearings and the comment period preclude that possibility. Whatever alternative the Forest Service chooses, I feel that any roads must be closed to recreational vehicles during logging operations and that all roads be permanently retired afterwards. Tourism and the effects that logging has on this industry need to be studied. I would like to request that the Forest Service further study no action. . . OK, I said that. OK, that's it. I'll have more comprehensive comments on the plan in writing on the 29th.

G. Poremba: OK, thank you. Thank you. Anybody else like to comment?

Again, we will be back here Tuesday night to take other comments of people who couldn't come tonight, so feel free to spread the word and maybe we'll have an opportunity then if they couldn't make it. OK, Thank you. - - - -
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Can you give your name again?

G. Mapes. I want to make some additional comments for the record and in writing here additional. Given the alternatives my first choice remains Alternative A, but my second choice would be Alternative C as there are fewer miles of road constructed and fewer new acres of clear cutting in Alternative C, however, I would not like to see any roads built in SALTERY or Crab Bay as in Alternative C. Additionally, I do not want to see any road connections to Peril Strait from Tenakee Inlet either from Crab Bay to Peril Bay or Corner Bay to Peril Bay. I do not like to roading in SALTERY Bay or Crab Bay so from this perspective the non-roading of these Bays as in Alternative F would be desirable. Actually I would like to emphasize that no additional or any roads be built in SALTERY, Crab, Seal, Long nor any roads in Goose Flats. That concludes my additional comments. Thank you.

Tobin Rufke: My name is Tobin Rufke from Tenakee Springs, Alaska. I represent myself and all the other people in the world. I've looked at the alternatives on the wall there and my main concern is the new roads running through Class I, II and III streams. I believe that these will have an adverse effect on the salmon runs in these streams. Alternative F seems to be a fair compromise, to me, for it seems to have the least impact on these rivers Class I, II and III rivers and streams. I believe that the world needs trees to do what they have to do with them, but I also believe that the world needs to breathe clean air and oxygen and old growth on Chichagof Island is one of the last old-growth forests in the world. And I believe that we need these trees in order to produce clean air. As far as my subsistence needs, all the rivers and streams in these drainages, Seal Bay, SALTERY, Crab Bay have a great effect on my subsistence needs. I guess that's it. Thank you very much.

G. Poremba: Thanks.

Alaska National Interest Lands Conservation Act (ANILCA)
Section 810 Subsistence Hearings
Alaska Pulp Corporation Long-term Timber Sale Contract
Southeast Chichagof Draft EIS
ANGOON, ALASKA
June 19, 1992

G. Poremba, Hearing Officer: It's June 19, Friday, and we're in Angoon at the Senior Community Center. I think we've met before, my name is Greg Poremba. I have been selected to be the Hearing Officer by the Forest Service. This is Peter Carr who will be reporting comments and we're accepting comments on the Southeast Chichagof Draft EIS which will be included in the final EIS and responded to by the Forest Service. Because the trolling was opened, we're also going to have a meeting next Wednesday, so if people want to make comments next Wednesday, we're going to be here from 3:00-6:00 with an open house and from 7:00-9:00 to get comments again so feel free to spread the word about that. Let's see, and we are willing to accept written comments as well as spoken ones, and if you give your name and affiliation, I think we're ready to go.

Matthew J. Fred, Sr.: My name is Matthew J. Fred, Sr. I am representing the Cultural Community and the Angoon Community Association federal-recognized sovereignty organization. As your opening statement will say that you have met before and my opening statement you have heard before, but I will continue using that opening statement. We are a sovereign nation. Neither conquered nor defeated. International law says you must defeat a nation and conquer them before you take their country. As far as my community is concerned the Russians only held Ft. Baranof in southeastern and Ft. Wrangell. Each community is a sovereign nation. The Russians claimed that they defeat the Kiks. Aoi but it doesn't give them the power to take over the southeast because they have not defeated the other nations. We are opposed to over-harvesting in Chatham Straits for many reasons. One, it's a migratory route for salmon. Chemicals from the bark pollutes the water. Not only the water but the beaches also. Harmful to the deer. Coming down to the beaches to do salt lick from sea weeds, the bulb and the ribbon. Shellfish moves out. Eagle habitat are endangered. All eagles will habitat toward the shoreline watching the Straits for salmon. From there one of our Tlingits from the Kog Waan Taan have a name from the eagles. Looking out towards the sea. Dei Keel A Tin. Telling us that the sea offers life to the eagles. The tree offers their nests. . their homes. We destroyed the shoreline. We are destroying our national bird. Many things we have taken and destroyed to extinctness. Until that time comes, then, we get worried. A lot of times it's too late. Let's take for instance the sea otter. The Russians took that. When they couldn't find no more sea otters, then they decide to sell what was not theirs. United States saw the hopes of salmon build traps saw the value of the salmon, the sockeye the most valuable. The second, the silver, coho. Scow loads were dumped when only the sockeyes and cohos were taken from among them into the sea. And scows were towed to the fish creeks with row boats being used to tow nets. They get scow loads of red and silver salmon were taken. Finally, the traps were abolished by the State. Canned salmon industry saw another way to get the salmon. They devised what you call custom canning. Many companies will get together. Imagine the boats that migrated north from Puget Sound to Alaska. Each company servicing about 500 boats and each boat catching an average of 250. How much salmon will be caught in that bay for that cannery? Another dangerous thing that was devised all of a sudden there was no more for the canned salmon industry. Through their custom canning to pack. Then all we see now as evidence of each major bay which had a cannery or two canneries are the pilings that sticking out of the water. Canned salmon industry highly insured their canneries and then mysteriously burned them. Insurance were collected. Canned salmon industry did not lose a thing. Finally they got the hatcheries going. A lot of salmon started to return. I remember when I was a youth, we caught salmon and the salmon would stay firm for 3 days, but this does not happen with the hatchery salmon because it's not naturally raised—man-raised.

There is a lot of salmon all right. It's not an everyday thing now to hear a boat catching 100 salmon, raising one broom. Now you look at a boat to have 2, 3, 4 broom—400,000. But yet they are not making as much money when the salmon was cheap and the salmon was firm. They didn't make as much as the boat that caught 100,000 because the artificial fish that we are catching now is light. We were excited over the quantity of the salmon return, but not the quality. This is where first evidence of the word botulism came. Because the salmon was weak that came out of the hatcheries, not like natural-birth salmon. The way nature intended it to be. So there is salmon industry with no money. 400,000 salmon, 4 brooms on the boom. Yet no money.

Now we look at things, we look at the trees which all the living creatures depend on it for habitat. We started to take that. I read reports written by team leaders. We are fulfilling our nation's needs. I am yet to see how Japan is our nation because that's the only need we seem to be fulfilling. And the same holds true for the herring, herring roe going to Japan. Why are we favoring Japan? Why are we endangering not only the salmon specie but human beings are also being endangered. Each nationality in the world is provided by nature. What do we call nature? Nature is God. Their own diet. To keep them alive with the necessary vitamins and minerals. What is our diet? How do we depend on it? Just take a handful of seaweed, for instance. In that handful of seaweed you will find all the necessary vitamins and minerals you can imagine including enough calcium that will be found in one glass of milk. Now God knew what he was doing no place for our cows for us to milk and to get those calcium, but he put it in the saltwater—in the seaweed. Now all the seaweed going through the Straits washing back and forth. Our seaweed are being polluted. Now as we get over crowded in little spaces where there is prime deer because it's the heavily harvested area, you cannot find no prime deer because the beaches are polluted with the chemical and the deer go down there to lick salt. The deer is no different from human beings, we are animals, too. Only a different specie. They have their salt lick, they have their vegetables that grows underneath the old growth. When you've taken away the old growth, you've taken away their vegetable garden that nature provided. Then what? That's why they're so scrawny and not healthy. And people know that we've been telling other people, other agencies about this, and our people know and they look for another place where they can hunt. Places where they're not used to hunting. Places that could provide danger. We know our area and we know it well. We get lost. And we still come back. But in other places we don't because we're not accustomed to the environment. Now that's the reason why we'd like to see the coastlines saved. And we're not talking only for us as an Indian community because a lot of people with below the required income to do certain things are using the land and taking the deer to feed their family. Not only the Indians. This is also going to help them. Because we're always crying about the State as the State we're always crying about no money on this and no money on that, budget cut here and budget cut there. Well, budget cuts are affecting everything, even the welfare agencies. Pretty soon we're not going to have no money for the welfare agencies, but we're not looking at that as destroying human beings, but that is what we're doing. We are actually destroying them and we like to feel like we're innocent when we're doing that but that's what this deer harvest, I mean that timber harvest, is amounting to. We are taking away their take of subsistence and people actually die from hunger. Because our people have always fed when you have nothing in your stomach, pretty soon your stomach will start eating itself which holds true. The chemical in the stomach will start destroying the other parts. You're only working it as long as it's working on something. That is one of the reasons why we're strictly against harvesting on the coast line. There are other areas back from the coast line or away from the migratory routes of salmon that there is prime timber.

Now the next one we are opposed to is roads. Now that there's a lot of 3-wheelers around now that we are looking away from. Them guys are just having a good time, running here and there and everywhere. But that's not what they are doing. They are running down the deers. We said the same thing about the airplanes. Pretty soon we saw that there was danger in hunting wolves with the airplanes. Wolf became an endangered specie. Then they made it illegal to shoot the wolves from the airplane, because the airplane came up on them so fast they didn't have a chance. The same thing holds true with the 3-wheelers. But look, people are beginning to look the other way. Oh, they are just having a good time. Yes, they are having a good time taking deer. And a lot of them are carrying dummy plastic cans, removable top. How much gas are in that tank? Nothing. But the hindquarter goes in. We are aware of it. So what's the difference between the 3-wheeler and the airplane that almost destroyed all the wolf?

They're both as dangerous because nobody is keeping an eye on them and nobody is eye-balling them. Nobody is monitoring their moves because we think they're just having a good time but they're here having a good time taking the deer because there is evidence where only hindquarters were taken. Because the eagles come down there and the crows and the sea gulls come down there and start eating on it and our people look and all they took was the hindquarter. Because when we take a deer, we use the whole thing. It has its own byproducts that we use for our livelihood again. Nothing is destroyed except the bones. They are the only things that we don't because even the head is boiled down, rendered, boiled down just like the Japanese use sauce for cooking, to flavor. Everything is used on that deer when we get it. The tribe would use the stomach we use, the liver we use, the heart we use. So there's very little that we don't use so it's 100 percent take for us when we take a deer. Not for just for the joy of having cutting a round steak after it's been frozen from the hindquarter. Everything, in their way of killing everything is destroyed.

Now we're not taking a hard look at what kind of subsistence resources we are destroying through timber harvest and road building. We're opposed to road connecting from Tenakee to Chatham or to Peril Straits because this is still inviting more people which I have described. People whom we are not monitoring. People who we think are just having a good time, but here they are destroying a lot of the deer habitat. If one would take an actual count of how much deer they take, I think it would result in some eyebrows raising. Now these are the things I am concerned about and I'd like to conclude with saying if there are no possible alternatives, which I know there are still some if we took the time to work at them, I would chose Alternative "C" for my people. But I would wait until a study, further study, were made. If there is a possible chance that we can go further than Alternative "C." This concludes my testimony.

G. Poremba: Thank you. Anybody else like to make some comments, or have any input? Would you like to say something? OK. Give us your name and who you represent.

Frank Jack, Sr.: My name is Frank Jack, Sr. I'm an Alaskan-born. What else do you want?

G. Poremba: That's fine.

F. Jack: Well, from gathering things and the way I see it, we talk about subsistence all the time. Seem like that issue is going so far it seems like when it's going. . .it started not too long ago and it seems like it's, I don't know how far it's going to go, but the way it seems to me is this. You know, on subsistence, many years ago, my grandparents they come from here. They used to go out and get some fish where they need to get it. They go from Basket Bay all the way to Cape Ommaney. If they don't get any here, they go to the other. So the people, the relatives, can have a share in it. To have that deer and some dry fish wherever they can get it. But it seems to me the more we talk about it, the worse it's getting. How many people do you think that sit in the office that don't eat fish. Let me ask that question. How many people that are in the Senate right now are Alaskans? That are making law against the subsistence, use of it. I don't believe any of them are Alaskan-born, but very few of them that I can see. And still they talk against the subsistence use, they don't try to help the people of Alaska. They try to work against them.

Not too long ago, I was listening to a news that brought out the unemployment. They are talking about the unemployment people that are, it's so that they can't, they don't try to help them—some of them. Why is it that we are so against subsistence, when it could help those people also? The people that are from far away country. They eat off the land just like the way we do. There isn't any one person that I can see that is not going to get along without subsistence. Not about 2 years ago I was in Anchorage. I met a friend and he said, "I was all the way to Warm Spring Bay," he said. "I came down. I did some hunting. I got my share of". . .he's a dentist. So you see even those people that are sitting in the office making thousands of dollars, they still get their share of it. And why is it that they are making law against subsistence? I don't see it. I know in a few years from now our children are not going to get any subsistence without permit because it started in our area already. You're gonna go cut wood,

you're gonna have to buy a permit to cut wood. So you see those things are gonna. . .how about the person that don't have the money to buy a permit. . .how are they going to do to get one? And that's the size of it. This subsistence that we talk about. I believe Matt is right when he start talking about the deer what we use. We don't leave any part of it off. We use the whole thing the same way in any kind of a fish that we get. If we don't have a place to put it, we dry it, we dry the fish. So in wintertime when it comes around, we use it because not everybody that's in the office in our community here in Angoon that work to earn money, but the biggest part of I see it for myself. . .the biggest part of the people that are making bigger money than anybody else in the legislature are the ones that is hurting the people. To make law against the subsistence.

We do things for the benefit of our community here in Angoon. To make our people livelihood better. We talk to them, we make sure that they do what we teach them what to do. In line of catching fish we tell them how to go about it. And all these things that we use, we pass it on down to our children but now we don't. . .we hear about the subsistence all the time. And it's not helping us any, nothing. They closed the season not too long ago for our subsistence at Chatham. Before we even, I got my subsistence permit to go and catch fish at Chatham and what happened before I even got to get. . . before I could even go with somebody? They said they closed the subsistence at Chatham. You can no longer get fish from there. Why is it? They are doing this to the people. You see, sometimes I wonder the area that they are talking about all the way through Alaska. The things that they do to the environmental you may say. The things that you see where they cut wood from the woods there is a poisonous, what do you call, I don't. . .there was a brother that came to me one time and said, "Say, we are having an experiment. We're experimenting some things that we need to know. And we took some bark off the hemlock and we put it in among the herring and among the fish and they were feeding the fish, but still when they put that hemlock bark on the bottom of it and the fish didn't last. The herring didn't last. Few days later the herring were all died off. And I believe. . . who is responsible of killing the fish? Where we could use it. You see, the people that have something to do with. . .like Matthew said there, road that are going through where the water comes down from the mountain. Those bark that fall in that water, I don't know how far out it goes into the sea. And what about the fish that's in the creeks. The last time I heard of this was in Hood Bay. There was so much fish in a creek and they cut it off. They put a net across it, across the creek. And what fish that wanted to come in for spawning in the fall. I heard there was some fish. . .that there were some fish right at the weir. It came against it and they all died off. And here we couldn't even get anything to live on. So you see the size of it. If I were to tell you, "well, tomorrow you stay home from your job. Don't come to work," how much money do you think you are going to lose? And what you're going to do for tomorrow if I'm going to tell you to stay home? You're going to fall back on subsistence. You going to try to get all you can to get the subsistence. Now you see the difference between a person that don't even eat fish or don't even eat any deer meat. I've seen many of them that eat dry fish.

I was in Anchorage in the Army. I've seen those people up there. Everybody eats fish. And now they cannot from the looks of things that everybody's crying over the subsistence. And I believe that whatever we get to help our bodies we need to get it. We need to live off. . .if I don't have money, I'm going to go down to the beach tomorrow to get something to eat. Maybe with what few I got I'm going to live off on it. . .if I don't get the job. Well, these are the things they don't look at. They just want to hurt the other people. Like I say, I don't know how many people in the Senate that are from far away country. They don't even want to live on subsistence, they making law against the people. They don't want to have anything to do with them. I have seen it when Hinkel got on a chair. That started. Got worse and getting worsen. It's not going to stop because of one person talking about subsistence to hurt other people, but they didn't look on. . . it's hurting the state also, for unemployment. From what I can see. So I don't know how far it's going to go, but we're still on that same issue from last time we were here. I don't know what you got for us. What good report you have for us to help our people.

Sportsmen, they're playing around with fish. You see Kenai, the river, they're letting that fish go. They don't eat it. They don't care. Sportsmen don't care. They are playing with it. And here in subsistence we hear about it all the time. So I don't know. I don't know who's for who. So that's all I got to say.

G. Poremba: Thank you.

G. Poremba: We do have a signup sheet on that table by the door there if everybody can make sure they sign up and put down their addresses because we'll send out copies of the transcripts to everybody that signs up. So you can review the comments that were made and make sure that we haven't misquoted you in any way also. Anyone else like to talk? You could start out by giving us your name and who you represent, please.

Joe Jim, Sr.: My name is Joe Jim, Sr. I born 1902 the May 15. I am 90 years old and I don't have an education, I never been in school. I have been staying to my grandpa's. I'm from Juneau. They all died off. And when. . . I don't have any education. If some of you don't understand what I say, ask me what I mean. When I was a boy anything for wintertime my father been doing fish, meat and I can't do that, and if it spoil because I know how to work on it. Our people, Tlingit people in Alaska, the one and of today the young kids they sure like to eat and dry fish. 'Cause that's the way our people in Alaska. And, I don't understand maybe, I don't have any education that's why I don't understand, I guess why. How many years now? What we talking about? We against to one try to stop what we eat. The God create us in Alaska. The land of fruit. How to work on it and for wintertime, that's the way we're raised up our food. We don't raise on the White Man's food. There's lots of people that died off. We using too much of white man's food, maybe we eat too much and we don't know how to use it. Some white man I seen in the store what he's going to buy he read it and someone say, "Take it back". All kinds of white man's food that's poison in there, but we don't read. . . maybe we eat too much and we get poisoned for it. 'Cause if we mix it up when we eat our food, meat, fish, then after that we eat, we drink coffee, bread. We mix it up. I think that's the people that's living today. That's the white man's food that kill us off on a top of it that alcohol and drugs. Who open our people and kill them? This only comes from bad stuff in Alaska. I don't see why they never give up. How many years the talk against what we eat? Why they don't tell us what they want to do our people anyway? Not only us, the people been married to our people.

A white man and a born man in Alaska, they always, they eat just like us. They eat from the beach. What we eat. They born in Alaska. We not the one eat all this thing and try to stop to eat it. Look when they going to spawn the eggs and herring. How many big ship to load it down? Just cut the small eggs off and the rest of the one dump it off. And how many summers now this time king salmon, trolling, the open 2 times and the next time coho season going to open. And let them lose the king salmon. If the one break off inside, the blood coming off, no more the dead. And someone wants to cut on the stomach and push the hook off, and that's a dead fish. Then never even take them home. That against the law. If the got the man fishing commission license, he never even take them home. That's against the law to take them home to eat it. That's a funny to me how to make all kinds of law, that's why I say they make the law every year almost every month. And that given bad time fish and game on the top of it. Why they don't have us, our people, that know how, Tlingit people. We are American citizens. Look how many young kids up there. 160 kids in school. United States citizens when they grow up today. Just the same on the top of it that try to stop what we eat and how we going living if we got no money, old man like me now, I can work for nobody. I got my grandson and 9 people the kids my grandson and I got a big family. I have to dry 20 cohos, 20 sockeyes, how we going to live on that for wintertime?

Sometimes I make a funny question. I thinking about it. Why they tell us now what they want us to do? They should explain to us now, how many years to never give up this what we eat? Now, gee, I just surprised. This law, some times they're really funny to me what to say. You have to get permit? How much you're gonna eat? Our grandpas from. . . way back in my father and my old people, they never have permit when to go to eat. Now this time just like a big tide coming up, if we don't talk about it, the big tide's going to come over us. If we don't talk. We have to talk. How many years now? I think that's the only way we can take it. We can hire a lawyer and send him up to Washington D. C. What the United States want us to do to never eat our food? We gonna die. They want us to live like the Africa people? The starving, all the animals in the country, Africa, just the same the people there really get skinny. We not the one eat all that fish. The fish and game law, they have to shake them off that king salmon killed for nothing. Now this time the fisherman's got only one king salmon all day fishing. We not eat them all that king salmon.

They blame us to the fish getting short. If the anything Alaska, United States sell it to down below. Our food. Everything what we got. What God create us in Alaska. Here on they come and we don't say nothing. They make us American citizens, but they move us off anything experienced who can't run it. For a long time when I was a young fella. If we can find a gold, we can't run it. Does somebody have to run it but not Tlingit? That's the way from the start coming out from up today who Tlingit in Alaska who's got a big business. That's only one that got business in Sealaska, but we don't get much. All the offices got the money the title. We got just a few. And everybody feel happy we got few dollars to pay our bills. Same thing our corporation of here. New job in here. Just not big money to give to this village. Just a few months no more the money. I just want to go down the beach. Go out fishing. Anyway, that's really the people scared to get halibut. We got too much fish we get into trouble. If I go out get the sport fishing but have to get 2 fish. And look at the bunch of kids I got here. And my grandsons. That's pretty tough on a big family. The way they treat us. If the halibuts from the start in Juneau, my grandpa's they talking of to 6 o'clock coming together. They talking about how they going to treat us someone said "no." This someone of them who one of them is name Shagat, he said "We gonna find maybe we going have a tough time. You can't do anything what you want to do. When pretty soon going to be? They push us back and they boss you around and that's the best way now. Take up money and send two men to Washington D.C. and talk about it. If you talk in here in Alaska you wouldn't make it. They read the paper, going to put it in the garbage can. One of the old mans said, "You find it out. Maybe after I died." Now at this time every Yankee been tough on us but I got the grandsons and all my family. Of all young. They going to have tough time, but me just I ready to go in someplace. I won't know it. But, how about the next generation? All the young people here. That's United States citizen. And I don't see why we can't eat our food just like somebody else coming around from different place and somebody else, we all American citizen. They should put our people in Tlingit they have to help each other. Our people. But the offices for government workers they have to get the boss and send him someplace. You going to do this and you going do and they never thinking about we are American citizens. Anytime a war coming around, they call all our young fellas the Uncle call him. He can't get away. Here, come on, you have to be good soldier. But the way they treat us we don't feel good about it. That's a funny to me how they treat us next year, next year, next year, that's they going to talk that way. We're going to keep on talking about it. That's the only way we can make it. Send people to Washington D.C. about this. Hire lawyer and go together all the people that's the only way. If they make a meeting in Anchorage, how many years now? They 're never coming out right. Lots of people, smart people talking through the law and a Ted Stevens coming. All Alaska we don't get what we want. We don't make it. Now this time we talking here they have to make if we talking about what is strong they make a law against it again. To beat us that's the way they coming out. If we do that like that some people have to go Hoonah or Sitka and make a petition. What do we want to do that's only way can make it and hire lawyer and go to Washington D.C. That's only time we going have non stuck (?) anyway. Just have to talk, that's all. Anything we don't talk about we couldn't make it. If he tell us take your clothes off through the law we just have to take our clothes off and walk out without clothes. Almost maybe they coming maybe they going coming that way too. I'm really ashamed sometimes. I don't know what kind of citizen we got. A second class citizen. I ask lots of people what kind of law we got? They make the law two. One for White Man and one for Tlingit. And what the White Man doing we can't do it. What kind of citizen we had? That's terrible, that one. That's all I want to say.

G. Poremba: OK, thanks a lot.

J. Jim: Ya.

G. Poremba: Since nobody new has come in, time out? I was going to say if you'd like to get up and make more comments, you can. If something new has come to mind...

Matthew Fred, Sr.: My name is Matthew J. Fred, Sr. This is my second time at the microphone. I am the Head Cultural Leader for Admiralty and Angoon and I'd like to add on part of my testimony cultural sites on the area which is being discussed.

Let's start from East Passage point, southern point of Tenakee. That was one of the biggest halibut subsistence ground with burial patches along that area which is highly sensitive area to our people. In the next cultural site with burial grounds is Basket Bay, Kook Lake or Seeples (??) Angoon. People were lived there and how long have they lived there. The story that we tell of the beaver dams. Every time we do it reminds us of Tenakee. Of where our people lived.

Now everyone one of you know that the bedrock is underneath the sand in every creek. But the story goes that the beaver turned Basket Bay upside down because in every race it doesn't matter white, brown, red, or black. They are people always passing unpleasant remarks. And this is what happened there. One young man passed a remark to the beaver. You weren't brought here for a pet, you were brought here for slave. And the beaver got downhearted and he started fashion a tool there by his pond and after he finished those he tried them out. Finally the day came that when he was going to show these tools to his master which is who he is supposed to be a pet to. His bow and arrow. A new kind of arrowhead. New kind of lance with a new kind of head. So he was going to show the effect to his master. He used the lance first. Holding the arrow in the bow to protect himself later. And he killed the chief. He went over to his pond singing a song as he went, "Never a time has this happened in history that a person will turn over a community," that was his singing. He jumped in his pond, he flapped his tail and Basket Bay went upside down. Today you see the bedrock on top of the creek. Nothing underneath the sand. This is how long our people have been staying there. How long our people have been burying people there. So that area is sensitive to us because it is also a burial ground.

And the same thing holds for little Basket Bay. The village site was in the lagoon. A large lagoon if you have been there. A boat up to 40 foot can stay stable anchored. The lines running to shore. That's a favorite place for our people. It has protected their canoes and that was a good area where they can get salmon over from Basket Bay to Little Basket Bay. And then Whitestone Harbor. No, No, Whiterock across. Another area that there were burial grounds for our people. And then there at, I forget the name of that island, that high-water island, that Morris Reef. There's one bay facing south and one bay facing north. We use both bays. And there's burial grounds there also up to the island. Up to the point that's Morris Reef. And this part I forgot to mention because I jotted down notes but I forgot to jot down the part of where it's very highly sensitive to our people 'cause our people are buried there. And Mr. Jim touched a little bit on the disease that was brought to us by Caucasians and the smallpox epidemic. Our people the only way they died before pre-Caucasian was old age. Some got so small they were carried around and that's the only death we knew. We knew very little of eyeglasses. We didn't have need for eyeglasses. Even to the old age our people got carried around, they still had their eyesight. Now, now from a very after the Second World War I start sporting what was known as false teeth and they call it dentures again. But our people had no need for it. Their teeth ground they were flat ground down so much. We have one gentlemen in town named is Charlie Joseph, Frank's uncle, who still strictly sticking to our cultural diet. He hasn't got one decay in his set of teeth. He has all of them. This is what our subsistence means to us. That's why it's very sensitive to us, beside commenting what little capital we can earn. It's very important to our livelihood and sometimes we would get carried away and we raise our voice, not meaning that we are mad at you, it's just that we get emotional when we start talking about these things.

When I was a young man I heard a joke and maybe I told it the last time so you must know that joke. It is about this Indian Chief. I guess down below they call them chief up here we call them cultural leaders. Traditional cultural leaders. Because, anybody can be a chief. You know chief engineer, chief bottle washer, chief cook, everything's a chief. So we like to separate ourselves from that kind of brings down what we really are. Well, anyway this Indian chief went to Washington D. C. to talk to the Great White Father.

And he went to a restaurant in that hotel and he sat at the counter instead of the table. Next to him was sitting a Caucasian fellow that's been out all night. I guess he drank so much that he can't stomach his food. All he was there for was coffee and juice. And he was amazed because the Indian chief next to him was really gulping down his food and he was envious because he can't do it because he was drinking. And he replied, "Gee, I wish I had

your appetite.” The Indian chief looked at, “First you take my land, now you want my appetite.” It’s no joke no more, this is what’s happening. This is telling the truth. This is what really happened. It’s no joke no more. First our land. Russians sold it because they think it was theirs when they didn’t even defeat nobody. The Sitka Kiks-Adi walked away because they didn’t know the meaning of the white flag which the Russians surrendered. Then they turned around and wrote the records different. And this is what happening with the over-harvest of timber. It’s taking away our appetite. That’s what it amounts to. So this story I told you is no joke no more. It’s a reality. Thank you for the second chance and I think Gordy Williams is here.

G. Poremba: Ok.

M. Fred, Sr.: Thank you.

G. Poremba: Would you like to make a comment? Did you get signed in on the signup sheet with your address and give us your name and affiliation?

Gordon Williams: My name is Gordon Williams and I’m here representing myself tonight. I am a member of the Angoon Fish & Game Advisory Committee, but I am not here speaking on their behalf tonight.

I guess I’d like to start with kind of the thing we say at everyone of these hearings that we have this time of year and they seem to always hit this time of year. It’s kind of uncanny. I hope it’s not planned, but it seems to be that, you know, I’m a fisherman and I run a fish buying station and I just, you know, came in from fishing this afternoon and had to sneak away from our fish buying operations to get up here and speak tonight so it seems that there’s got to be a way to hold these hearings in these matters in a more timely basis in the winter and the spring. I know your planning takes time but it just seems like every time we come to one of these, it happens in the summer and it’s just really unfortunate. You don’t see much of a crowd and that’s part of the reason. Also the other thing I often complain about is that, you know, the Forest Service being the dominant land manager in SE, you’re our landlord and we hardly ever see the Forest Service except in response to a document like this. You know we’ve asked many times in groups that I’ve been involved in that people of responsibility in the Forest Service come out here regularly to meet with people. Not in response to a document or 5-year timber sale or anything like that or just to hear people out and so we get to understand each better before we, you know, before we’re into a formal process. I think the Forest Service ought to make a point of having some sort of a line officer come to all the communities 3 or 4 times a year so he can get to know all the players and get to know the people and concerns and we can hear your concerns and I think it would be a good process if we could get it going.

In regards to Southeast Chichagof again it’s we’re responding to a small one picture out of a 20-picture roll, you know. We’ve always asked that the cumulative effects of an area. And I think it’s getting a lot better looking at the maps now and things and finally getting a little bit better job of seeing what’s happened and what’s in limbo and what’s going to happen with this one. But again there’s another 20 years left on the contracts and without seeing what ultimately is planned for the whole area you really it makes it tough to comment on some things especially with roading and things. You know the road comes into this timber sale and then you see the next one plays a key roll in opening up a whole new area. And again this document is, I think, shows a lot better response to the Forest Service to some of needs and concerns but I think it’s a little bit flawed or quite a bit flawed from the beginning. You know there’s an assumption in it that there’s going to be a harvest of over 100 million board feet. You have a no action Alternative and then everything else is 100 million board feet plus. And so you find yourself looking, you know, for a preferred alternative that’s somewhere over in 100 million board feet. I don’t think that’s the total range of alternatives that should be looked at. I think there needs to be something from “no action” to, you know, in this case, a lot less say 40 or 50 million board feet and the tradeoffs involved in that and then, you know, then 75 or 80 and then on up so that we can look at all the needs of the area. And you know over the years I have responded to a lot of these. I know that there was a similar draft or DEIS for like northern Chichagof

probably 10 years ago or 12 years ago or something that said there would be no impact on subsistence and now we look at what's happened in the Hoonah area with the roads and the problems it's caused with fish and game management in that area it's totally changed the methods of harvest in the area. It calls for some drastic cutbacks in bear take and you know there's been a huge influx of road hunters from Juneau area into Hoonah and we start to see that happening in southern Chichagof now.

Every time you punch together a road, connect a road with another road, and that kind of thing you are developing a transportation system, you know, we've seen it on Prince of Wales Island. There's a huge transportation system now. It's totally changed the way resources are accessed there in northern Chichagof. The resource access is totally changed and now over time it will happen in southern Chichagof. I think the Forest Service is conducting a huge social experiment and social change here without ever really addressing what they are doing. In the early days of logging, the logging roads went in and then they were supposed to just be abandoned and let go back to nature and there was a short window of time when people used them. But nowadays with the roads that the Forest Service puts in that are around for a long time and used in other entries and everything it and kind of developing a SE Alaska transportation system, but without ever holding hearings on a transportation system. They are logging or logging access roads and you know the quality of the roads is justified because you are producing a transportation system for SE but I've never been to a hearing on Chichagof Island that regarding transportation systems. And I don't think it's ever been looked at in that regard. So in the document by saying, you know, if there's a problem on access by roads, you'll try to control it. That's a really hard thing to do. Every time the road systems get in the people start using them and that's one way that the Forest Service justifies the budget is to go to the Congress and say, "Gee, we're building roads that are helping people out." Well, it's helping some people out perhaps that find it a new way to access resources but it certainly doesn't help the subsistence users and the people in the area who have been accessing resources through customary ways for hundreds or thousands of years. It puts them in direct competition with them.

The other thing I don't think is looked at is the displacement of people from their areas that they hunt or fish by logging activity. A lot of people will not choose to continue to hunt or fish in that area whether they be from Sitka or Juneau or wherever they will decide that that kind of environment isn't where they want to do that any more. And in this case they will be looking at Admiralty Island where there isn't near the development. The people that are looking for to stay away from roads, stay away from logged areas or recently logged areas are going to be more and more displaced to Admiralty so an effect on Angoon subsistence usage is going to be the displacement of people who currently use Peril Straits or Tenakee Inlet who find it harder and harder to go to areas that haven't been impacted or have a log transfer facility or something and they'll chose to come over here. My family is a good example of this and I said this in the TLMP hearing last fall that I was born and raised in Juneau. My father's lived here for 74 years and we always hunted in False Bay on the northern part of Chichagof. He's hunted there. Well, we did up until 5 years ago or 6 years ago. He hunted there for 30 years and I went up there with him. And I've lived in Angoon for 16 years now and even now after I moved here I still did the bulk of my deer hunting up there. We'd go up every fall and put up our camp and hunt up there and now there's a log transfer facility there and a road to Hoonah and the whole area is changed. He's no longer the least bit interested in hunting there and has come down here to hunt the last 5 years. So there's a little micro example right there of displacement and it's happening with a lot of people that they don't want to go to their favorite hunting trail and cross a road and have to fight with pickup trucks and the whole thing. So you are gradually changing the nature of the whole island just like Prince of Wales was changed. And, again, I think whether the document admits there is going to be a decline in deer, I don't exactly see how that translates into the no appreciable impact on subsistence. There's already a lesser quantity of deer than the demand in that area and it can only get worse if there's a decline in resources due to this sale and, you know, again we'll probably be 5 or 6 years from now looking at another entry into this area in some regard. And each one of these is going to take another chunk out of that and I just don't see how you can say that there's not going to be a significant impact in subsistence over time. It's bound to happen. In earlier documents that, you know, we commented on there's was always going to mitigation for deer loss habitat. There was going to pre-commercial thinning and these kind of things and those things have found not to work, to be too expensive and not, you know, to provide the habitat in the timely manner that it took to make up for lost resources.

So, you know, I think this document a couple places speaks of mitigation for subsistence losses but it doesn't really say how that's going to be done. I don't know if there's new things that the Forest Service anticipates doing. But we've got a pretty good volume of data now on the effects of the clear cut on deer population and knowing what happens after 10 or 15 years when the second growth comes in or 20 years and gets thick. It's just a real problem. You know, it's going to be a 100 years or better before there's the least bit of deer habitat back or 150 years or 200 years or whatever and then we're on a schedule like this plan for the area you're just never going to see that kind of habitat back. So I think that the Forest Service has done a better job but again, and there's hard-working professionals that put these things together, but I think that your job is impossible because of the predisposition of the, you know, of what you're supposed to conclude, I think, is rather assigned to you and it's always been that way. And that's not necessarily the fault of the people who are putting the documents together, but it just makes you not be able to come out with a truly representative document. If, you know, under the contract, you've got to come up with the board footage and Southeast Chichagof is chosen as the area then the professionals have to go in and try and make the best out of that. That's what we get. But I think that we need better than that.

I think the Forest Service nationwide now is starting to, at least, with words, respond to, you know, the overall needs of the forest and look at a more balanced package of resources instead of wood fiber and then, you know, we need to really take a hard look at all these areas now and decide whether or not there's not a better way to do it by going in and taking a much smaller volume this time around as we see what goes on. Look at other areas in the Tongass that might be accessed so I don't have a specific comment on the Alternatives. I think the preferred Alternative is certainly the ones that most always some variation of that as most always what we see so that's certainly the map that I paid the most attention to and, you know, was in some ways pleased that there was not as many roads on that as we saw. I think it was Alternative "C" or something that had the two main access roads, but again there's a road that crosses from Peril Straits from Tenakee Inlet so you're making that crossing. The Forest Service has wanted to do that for years. First up to Kadishan and then roads through Sitkoh and now we get the road down through Broad Creek or whatever it is and pretty soon that will be connected with Sitkoh in the next sale, I suspect and pretty soon you've got a whole system of roads going all the way around SE Chichagof. So I think roading needs to be kept to a minimum and I think log transfer facilities should be kept at a minimum, too, but I understand, you know, you need to access. You got to have a road to access existing log transfer facilities so I'm certainly not in favor of the whole bunch of new log transfer facilities. But I think roading needs to be kept to a minimum and access to those roads, if it's possible to restrict it is very important. We have seen a lot more 3-wheeler and car use on SE Chichagof the last 10 years. Out of Sitkoh Bay especially there's vehicles kept there that are used to access that whole road system. There's numerous boats from Sitka and Juneau that bring ATVs or motorcycles out and use the system. But that's a whole new way of hunting that SE Chichagof had never seen until the last 10 years. So I would like to see the Forest Service go back and look at this area and come up with a more reasonable balanced alternative but lesser timber volume.

There's also a gentleman in town who is (or he's out of town now) who left a statement for me here that should be read into the record or give it to you in a written form. It's a written statement.

G. Poremba: You can do either or both. Maybe you can read it and give it to us or just give it to us if you wish.

G. Williams: Well, I'll read it to you and then I'll give it to you. This is from K. J. Metcalf, Box 201, Angoon, dated June 16, 1992.

Following is my statement I wish to be included in the record of the ANILCA 810 Angoon Subsistence Hearing.

I agree with the official position of the City of Angoon. In summary I believe;

1. The Forest Service has violated the National Environmental Policy Act (NEPA) by making an unfounded decision, prior to the NEPA process, to harvest at least 108 million board feet in this area.
2. This violation has led to a second violation of artificially constraining the range of alternatives presented.
3. There is an obvious lack of any alternative that addresses the subsistence and economic needs of Angoon and Tenakee.

4. Angoon's harvest, and therefore need, for deer is grossly understated in the Draft EIS. Angoon harvests over 800 deer per year. An estimated 40% are harvested on the west side of Chatham Strait. In 1991 deer harvest was lower due to fewer deer. The 1991 Angoon subsistence harvest fell short of the demand. This resulted in an economic and nutritional hardship for some Angoon families. The prediction that Angoon will be able to fill its subsistence needs in the immediate future is wrong. Past and present logging on Admiralty, Baranof and Chichagof has already severely constrained the ability of Angoon to subsist.
5. The predictions of impacts to subsistence are grossly understated in the DEIS analysis.
6. The Forest Service has once again insulted the people of Angoon by coming to them at the peak of fishing and subsistence activity seasons. This can be translated as the Forest Service saying; "What you have to tell us is not very important, but the law says we must ask, so here we are to ask." You are asking us to drop one of the few opportunities open to us to make money, so that we may meet with you to explain why we depend on subsistence, since we have so few opportunities to make money.
7. The Forest Service has a TRUST responsibility to the Indian Tribal Government. The SE Chichagof project will impact Angoon's cultural sites, subsistence, and economic well-being.

CONCLUSION: The Forest Service must do a supplement of the Draft to correct these major problems. That supplement must have an Alternative that addresses the needs of Angoon and Tenakee.

Signed: K.J. Metcalf

G. Poremba: Thank you.

G. Williams: I guess one other comment I would like to make I thought of as I read that is on deer statistics. You know, that again would be something that would be really nice for the people that travel here on a regular basis and get a feeling for what the community. This community has been surveyed so many times and asked so many questions about subsistence that people are really getting tired of it and I don't think that the quality of the data when you try and get site specific is really tough. You can get real general probably pretty good data on numbers of deer and things but when you start asking people, and I know you run into this all the time, you ask people where their favorite hunting or fishing spot is, it's really tough to get them to come up with that kind of information and you try and explain to them that it's important for things like this, but, you know, I think that if we had a more ongoing relationship with the Forest Service where people weren't intimidated by a survey or by a meeting, I think we would have a much better understanding of the needs.

G. Poremba: OK, thank you.

(Hearing closes with discussion)

Alaska National Interest Lands Conservation Act (ANILCA)
Section 810 Subsistence Hearings
Alaska Pulp Corporation Long-term Timber Sale Contract
Southeast Chichagof Draft EIS
TENAKEE SPRINGS, ALASKA
June 23, 1992

Two people attended the subsistence hearing in Tenakee Springs, Alaska held on June 23, 1992. Both submitted written comments for the record, and one attendee read her written statement verbatim into the record. Their comments appear in the written comment section.

Alaska National Interest Lands Conservation Act (ANILCA)
Section 810 Subsistence Hearings
Alaska Pulp Corporation Long-term Timber Sale Contract
Southeast Chichagof Draft EIS
ANGOON, ALASKA
June 24, 1992

G. Poremba, Hearing Officer: We're back in Angoon again. It's Wednesday, June 24, 1992. We were here on the last Friday on the 19th to get comments on the Southeast Chichagof Draft EIS. I'll let you make your comments now.

Matt Kookesh: I'm Matt Kookesh, resident of Angoon, Southeast Native Subsistence Commission Member.

First of all before I make any comments, I want to thank Gordon Anderson for working with Bob Willard on the Southeast Chichagof plan. The other comment I want to make before I start is that I want to thank you guys for coming back again the second time around.

Your preferred alternative I don't quite agree with—Alternative E. In fact, the alternative that I want is a subsistence alternative and I recommend that the Forest Service come up with a subsistence alternative so that you get more of the community involved in working with these alternatives, you'd have us working with you rather than against you. The other comment I have is that there's a couple areas that are of concern to Angoon and those areas are Kook Lake and the logging around the Kook Lake and Basket Bay area. And the other concern is logging roads along the Chatham Strait. Other than that the preferred alternative for me would be to have the No Logging Alternative and again, I want to thank Gordon for coming in and I hope you guys do take the City of Angoon's Resolution and recommendations. Thank you very much.

Matthew Fred, Jr.: I'm Matthew Fred, Jr, and I'm representing Alaska Native Brotherhood Camp Number 7 in Angoon. I'll have written testimony turned in besides this oral. The Alaska Native Brotherhood and the people in general in Angoon have always defended and have never given up the claim for their lands—traditional tribal lands in the Angoon area. It is in this vein that I am testifying. Our elders have always. . .I've gone to many hearings where the elders have testified at length. Many of them talking half an hour, an hour and they always claim the lands and always claimed their right to have a say over what's going to happen on the land. And it's always been with subsistence and with the grandchildren and the health of the grandchildren in mind that they testified. And it's also in that vein that I am testifying this evening. It's not for myself. It's for my children and the children that will come later on that will be able to use the subsistence resources of the land and hopefully that those resources

will still be in the condition that they are in today. The subsistence harvest in Angoon that is carried on is always done in a manner to make sure that there is enough resource left for the next generation. There's no random killing. There's no sport hunting. If somebody goes out and gets four deer they will make use of the whole animal. And if somebody goes out and gets eight deer, they make use of every bit of that also. And for the past couple years, I haven't been able to go out hunting and I have a friend that goes out hunting and he gets more than his share and I'm not ashamed to say that, but he shares it with other people like me that can't go out. And it's also done with the elders. The elders that can't go out hunting anymore, they get their share from people that get over their limit. And some people put down four deer every year and they very well they get more than that because of that fact. And also when a family is going to put on a cultural potlatch, that's the Caucasian term for it, they're required to get more than their share also and that puts him in violation of bag limits. They have to get more deer, more seal and more fish. And many times they have to get ten deer or six seals or a couple hundred fish and their limit is ridiculous like 25 fish that they're allowed to catch.

So with these are the kind of things that I've heard from the people that are up here on the wall up there, the past chiefs of Angoon, they have all said pretty much the same thing that they have never given up their claim to the land and they'll be the caretakers of the land as long as there is somebody that involved at the Clan in the hereditary way. They all testified ever since the ALP started cutting, I imagine they've been testifying. When originally I first heard them testify, I'd go to their testimony and hear them say, "Oh, they are saying the same thing again." But the redundancy is starting to strike home to me, that they have never given up a claim and there always was somebody here claiming the land and wanting to protect it. We oppose any cutting in South Chichagof area at all. We think there is enough cutting as it is. And it seems like every two months there is a hearing that comes along where there is somebody else asks you, "Well, what do you want? What's your alternative." And if it isn't there it is in Kelp Bay or someplace else and it seems kind of ridiculous and some people get kind of tired of testifying because it's the same old thing. We're getting nicked and dined to death and I thought of the analogy today that somebody will come in and say "Well, where do you want to get punched today?" You asked to get punched in the chin last time so you're running out of areas obviously enough they are going to be coming in the third time. Pretty soon there's going to be nothing left as far as deer habitat and fish habitat because it's the best areas are always near streams it seems to be. They say there's no conflict and that the land is being managed for multiple use, but it seems like it's always the best areas that are in question. Where there's lot of deer, where there's lot of watershed for fish and that's where the best trees always seem to be also, in the valleys, you know, where the streams are.

So the next time there's a hearing, I imagine I will be here again probably saying the same thing. And I don't think I'll get tired of saying it. I think there's other ways the land could be managed and if the Alaska Lumber and Pulp and the Forest Service says that these trees could be cut and regenerated, I hardly ever see any data, any testimony regarding "Boy, I sure love those trees that grew back and we're cutting them again," because I know they been cutting since the 50s and there's bound to be some trees now that they're harvesting and there's no need to be going back in these old-growth areas that will never be the same again when they're cut. So with that that's the end of my testimony.

G. Poremba: Thank you. Anyone else?

Lavina Jack: On behalf of the Alaskan Native Sisterhood and the Alaska Native Sisterhood works jointly with the Alaskan Native Brotherhood and the organizations stem back from 80 years and our people always used these organizations for education and seem like for years for subsistence, and I more or less just want to back up what the Brotherhood is saying, just to go on record on behalf of the Alaska Native Sisterhood because the organization, the elders, you know, were really strong-willed, strong-minded about keeping the culture. On the strength of these, you know, we strongly oppose further clear cutting on southeast coast of Chichagof Island, Tenakee, once known for its early run of chum salmon is no more and it cannot be revived. The Alaskan Native Sisterhood just stands behind this. And that's about all I have to say. I just want the Alaskan Native Sisterhood to go on record that we stand with the Brotherhood.

**Alaska National Interest Lands Conservation Act (ANILCA)
Section 810 Hearings**

on

Southeast Chichagof Draft EIS

Written Testimony

Southeast Chichagoff

My comment on the Forest Service's Draft Environmental Impact Statement is as follows:

The document itself is a daunting example of the Forest Service's bureaucratic obscurantism of environmental issues which will come to affect all who work, play, earn or spend in Southeast Alaska. It deliberately and painstakingly avoids enlightening the public of the immediate (this year) and cumulative (1961-2011, and beyond) effects of timber policy upon the Southeast Chichagoff environment (that is, its health: wildlife, timber, water, streams, and people.)

Over 700 pages of unindexed, meandering, and abstruse conclusions, supported by simplistic irrelevancies, incomprehensible charts and graphs which were chosen for their innocuousness and inanity, and un- or under-referenced pseudo-facts characterize the document assembled by bureaucrats/scientists paid out of timber budget funds. The myriad contributors break down and separate

detrimental impacts of the Alaska Pulp Corporation sale and harvest methods to such an infinitesimally small degree that the overall impact, the one of significance to the public, the one which says what is happening to their National Forest, can not be assembled.

The draft Environmental Impact Statement fails to describe the 1992 Southeastern Chichagoff timber sale and harvests' impact on the local or forest-wide environment. It fails to assess past or future sales or harvests adequately. It fails to address the future health of the forest and the communities it supports. Because of the lack of a clear and realistic environmental impact statement for the Southeast Chichagoff area, I must choose the "no action" alternative instead of one of the other several very similar alternatives which allow maximum legal harvest in those areas. The option I have chosen is, in the memorable prose of the draft Environmental Impact Statement, the only option listed which "is not an option."

Ed Baker
Ed Baker
Sitka, AK

Brian Brown

Alaska National Interest Lands Conservation Act (ANILCA)
Section 810 Subsistence Hearings

Alaska Pulp Corporation Long-term Timber Sale Contract
Southeast Chichagof
Draft Environmental Impact Statement

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The U. S. Forest Service is obtaining public comments on the Southeast Chichagof Environmental Impact Statement for the Alaska Pulp Corporation Long-term Timber Sale contract. You may use as many of these forms as necessary to provide written comments in addition to or in place of your public testimony. Either submit the form at the public hearing or mail it to the Forest Service by June 26, 1992.

SINCE THE MAIN SUBSISTENCE USE IN THE
TIMBER AREA IS FROM THE CITY OF TENAKEE
AND SINCE THIS COMMUNITY IS ALREADY
HEAVILY SUPPLIED FROM FEDERAL PROGRAMS INCLUDING
THE OF FISH & GAME I FEEL THEIR SUBSISTENCE
IS OF NO CONSEQUENCE HAVING SAID THAT
I WOULD LIKE TO POINT OUT THAT THE
HUNTING OF TIMBER WENT DOWN THEN OUT
OF DEER, RABBIT AND FISH FARMING
HUNTING WLL.

Brian Brown
FISH ISLAND

Mail this form to:
USFS Southeast Chichagof Planning Team
ATTN: Subsistence Hearings
204 Signaka Way
Sitka, AK 99835

Frank Davis

1
Frank Davis
6/24/92

Once again the USFS has released a document of great importance to Tenakee Springs when those most affected have the least time available. By design or accident, the 45 day comment period on the Southeast Chichagof Draft EIS coincided with the start of crabbing, a black cod opening and a halibut opening as well as the beginning of the tourist season and all the myriad activities which rural residents must attend to in spring and summer. The seasonal round of activities which characterizes subsistence is busied during these months. Why aren't these massive documents and their respective comment periods ever scheduled for January and February?

Our comments fall into two main categories. First, the contradictions in the DEIS between the management direction clearly defined by Congress and the continued USFS emphasis on timber production at any cost. Second, the failure of the DEIS to acknowledge the value of resources and activities other than timber harvest and the effects of large scale clearcutting on those resources.

The basic contradiction in USFS subsistence policy has not been resolved. Page 3-69 provides a description of subsistence and the clear direction given by ANILCA that subsistence uses of renewable resources "shall be the priority consumptive uses of all such resources on the public lands of Alaska". It should be added that the Tongass Timber Reform Act clearly reaffirmed that management on a "timber first" basis "must cease. But when it comes down to management decisions the USFS continues to give clearcutting the highest priority.

The USFS has been forced to acknowledge that large scale logging operations have long term negative effects on fish and wildlife. Page 4-141 states that within the range of the ~~range of the~~ action alternative's proposed habitat reduction there "will be sufficient deer for subsistence use in Tenakee's primary hunting area through the year 2000 but insufficient deer available for both subsistence and non-subsistence use by the year 2010." There is a "significant ~~restriction~~ of a significant restriction of subsistence use of ~~poor, but~~ ^{poor, but}

deer for Tenakee residents."

It is obvious that given this clear violation of legislated direction the USFS must revise its range of alternatives to achieve the goals clearly defined by Congress. Instead, the solutions presented by the Forest Service are to restrict non-subsistence hunting (which cannot occur until deer populations are already severely reduced) and to suggest that locals hunt somewhere else. In other words - "Tough luck*-APC comes first!"

In Tenakee Inlet, the areas affected by this plan are Crab Bay, Saltery Bay and In between. These areas are part of ADF&G Wildlife Analysis Area 3629, which extends from Crab Bay to Long Bay. The ADF&G "Strategic Plan for Management of Deer" gives a detailed analysis of the entire south shore of Tenakee Inlet and concludes that since hunter demand already exceeds habitat capability in WAA 3629 any further loss of habitat should be avoided.

The real kicker is that the Southeast Chichagof DEIS has conveniently been prepared under the old Tongass Land Management Plan, which designates Seal Bay and Long Bay LUD II (roadless). This gives the reassuring impression that the proposed activities are surrounded on one side by the Kadasnan Legislated LUD II area and on the other by Seal Bay / Long Bay LUD II areas. In reality the preferred alternative under the new TLMP DEIS shows Seal Bay and Long Bay in a category that permits clearcutting. In fact, every watershed in Tenakee Inlet except the two (Kadasnan/Trap Bay) that are protected by federal law will be open to extensive clearcutting under the new TLMP.

It is very annoying to find statements such as the last paragraph of DEIS appendix A-11, which blithely assures us that Kadasnan has so much "excess production" that it can accommodate the hunters displaced by habitat loss elsewhere. The USFS is evidently suggesting that reduction of wildlife populations through habitat destruction can be remedied by reducing any remaining healthy population through over hunting.

The DEIS ignores the importance to Tenakee Springs of non-subsistence deer hunting. Visiting hunters rent cabins, buy food and supplies and obtain services locally. Habitat losses that result in restrictions on non-subsistence hunters will harm the economy of Tenakee by eliminating that income. The economic impacts of non-subsistence hunting are not disclosed in the DEIS.

Although the USFS has been forced to acknowledge some of the impacts of clearcutting on deer populations, the agency still refuses to admit that clearcutting affects anything else.

Page 12 of the Summary asserts that "None of the alternatives is expected to have a significant impact on the commercial fishing, recreation, and tourist industry, or related employment." How can this be reconciled with page 15, which states that all action alternatives will affect persons seeking primitive or semi-primitive recreation opportunities, and that "the use of boat anchorages in Saltery Bay and Crab Bay may be affected for three to five years due to LTF's, logging camps, and log raft storage that would occur during timber harvest activities. These aren't impacts? There will in fact be serious impacts on people employed in the commercial fishing and recreation and tourist industries, as will those accustomed to subsistence and independent recreational use of these areas.

It should be obvious even to the USFS that affecting boat anchorages will affect both commercial fisherman and charter boat operators. In addition, in recent years there has been a resurgence of locally based fishing for shrimp and Dungeness crab in Tenakee Inlet. Most participants have been local people with a long term commitment to our community. These individuals are rightly concerned about the effects of log transfer facilities - with associated bark debris, fuel spills and other pollution - on the health of delicate estuarine ecosystems. Even more directly, there is an obvious conflict between shrimp and crab floats and log barges. One local fisherman has stated that he has lost large quantities of expensive gear when weather in Chatham Straits cause a passing tug to pull into Tenakee Inlet and circle with its rafts of logs. This situation will be a constant conflicts

if LTF's are constructed farther up the Inlet.

The importance of visiting deer hunters to Tenakee's fall economy has already been mentioned. In addition, Tenakee is very popular as a vacation destination both with Alaskans and sightseers from all over the world. An increasing percentage of the local economy is based on tourism in several forms. Last summer a young man who was born and raised in Tenakee had a very successful season as professional guide, escorting sightseers with an emphasis on wildlife viewing. He utilized Crab Bay and Saltery Bay on a regular basis, without taking anything away from the enjoyment of the next visitor.

Local experience with tourists confirms that people come to Alaska to see wildlife and wild country, not to admire large scale industrial sites. In past years a Juneau outfitter ran very popular kayak trips from Hoonah to Tenakee, which contributed to the economy of both towns. Extensive clearcutting in Port Frederick reduced the desirability of that tour to the extent that it is no longer offered.

Why hasn't the Forest Service analysed the value of the tourist business in this area? Where are the graphs and charts that show the earnings associated with each sightseer, photographer, hunter or fisherman that travels to Tenakee Inlet?

Why doesn't the USFS direct more of its budget toward construction of recreation trails and cabins, thus providing employment and enhancing tourism?

In summary, the Southeast Chichagof DEIS does not reconcile the conflict between continued large scale clearcutting and other sustainable uses of resources. It gives priority to timber harvest operations at the expense of subsistence, tourism, recreation and commercial fishing. The USFS must develop new management strategies which comply with ANILCA and the Tongass Timber Reform Act, and provide for a sustained availability of all forest resources for future generations.

6-24-92

My name is Matthew J Fred Jr. I am representing the Alaska Native Brotherhood, our membership consists of this communities male population. Traditional and Cultural usage of subsistence resources is our way of life.

The possessory rights of the Deishitaaan Clan of Angoon begins at Falls Bay on East Chichagof down to Patterson Bay on Northeast Baranof, Peril Straits which divides these two Islands and all of Admiralty Island.

The Tlingit people from time immemorial have been very protective of natural resources, it provides spiritual nourishment to our Culture and to our people! Much royal blood was spilled in defense of the preservation and maintenance of our subsistence resources.

The harvesting of Tribal resources was done in a fashion that allowed nature ample time to replenish itself, living in harmony with nature gave our ancestors the assurance these resources would be available to nurture future generations. The various different species of wildlife stock still in existence today is a testament to that fact!

Our chiefs of the past have always stressed to us "Be kind to the land and the land will be kind to you, be kind to the sea and the sea will be kind to you, be kind to the air and the air will be kind to you." They continuously reminded us these three relied on each other for the regeneration of their particular species!

Our people have always been cautious, taking visual inventory of our subsistence resources, being careful not to offer any danger.

On the strength of these facts we strongly oppose further clear cutting on Southeast coast of Chichagof Island. Tenakee. "Once known for its early run of Chum salmon is no more, it cannot be revived."

I am glad to have had the opportunity to testify on behalf of my organizations membership.

THANK YOU

MATTHEW J FRED JR

Alaska National Interest Lands Conservation Act (ANILCA)
Section 810 Subsistence Hearings

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My name is Douglas Glessing, a resident of
Angoon. As a subsistence hunter I am familiar
with hunting patterns in this area. Many hunters
here depend on the shore areas from South Pass
at Tenakee Inlet to the Angoon side of False Island.
Sitkoh Bay is especially important for us hunters
and fishermen. The southeast shore of Chichagof
Island must be protected so our subsistence needs
will continue to be met & our fishing livelihoods
are not adversely impacted. Stay away from the
cliffs & a mile or so off the beaches.

Mail this form to:
USFS Southeast Chichagof Planning Team
ATTN: Subsistence Hearings
204 Siginaka Way
Sitka, AK 99833

Thank you Douglas Glessing
BX 191
Angoon AK

Robin Hiersch 6/23/92

My name is Robin Hiersch and I speak for the artists, shamans, and craftspeople of these forests.

It is important to make clear that we draw inspiration and materials for our work from these forests. It is our life here in the trees with the animals that gives us awareness and vision. It is the wholeness of the natural state and the continuity of the old growth forest that provides us with not only our vision and awareness, but also many times with the materials we need to do our work. Our work in part provides us and all people with beauty, wisdom, health, and strength.

It is vital that the voice of the artists, shamans, and craftspeople be heard, as well as those who speak out on food subsistence issues. What we draw from these undisturbed old growth forests can not be provided from any other source.

All the earth is holy, and Tenakee Inlet especially so. Here, we can walk in the woods, tramp the beach, see the fish jump, the eagle in flight, and the bear emerging from the brush. We know the deer can graze in the canopy provided by old growth when the clear cuts are buried in snow. Life in all its diversity and prosperity are here in the old growth, and as artist and shaman and craftsman, we speak out for its continuing existence, unroaded and unlogged, as it always has been, and must continue to be.

What is holy must be left untouched, except by the gentle eye and hand of those who chose to make life itself and the example it sets the only profit from the forest.

Do not cut the old growth. It is the last footprint of God.

Robin Hiersche

TENAKEE SPRINGS

June 23

(Verbal testimony, but not on tape; see written sheet)

ROBIN HIERSCHE

My name is Robin Hiersche and I speak for the artists, shamans, and craft people of these forests. It is our life here in the trees with the animals that gives us awareness and vision. It is the wholeness of the natural state and the continuity of the old growth forest that provides us with not only our vision and awareness, but also many times with the materials we need to do our work. Our work in part provides us and all people with beauty, wisdom, health, and strength.

It is vital that the voice of the artists, shamans, and craft people be heard, as well as those who speak out on food subsistence issues. What we draw from these undisturbed old growth forests can not be provided from any other source.

All the earth is holy, and Tenakee Inlet especially so. Here, we can walk in the woods, tramp the beach, see the fish jump, the eagle in flight, and the bear emerging from the brush. We know the deer can graze in the canopy provided by old growth when the clear cuts are buried in snow. Life in all its diversity and prosperity are here in the old growth, and as artist and shaman and craftsman, we speak out for its continuing existence, unroaded and unlogged, as it always has been, and must continue to be.

What is holy must be left untouched, except by the gentle eye and hand of those who chose to make life itself and the example it sets the only profit from the forest.

Do not cut the old growth. It is the last footprint of God.

Mark Jacobs, Jr.

U.S. FOREST SERVICE, SITKA, ALASKA
TONGASS NATIONAL FOREST
CHATHAM RANGER DISTRICT
SOUTHEAST CHICAGO STUDY
June 8, 1992

Thank you, Mr. Chairman, for this opportunity to express my views. My name is Mark Jacobs, Jr. resident of Sitka Alaska. My mailing address is P.O. Box 625, Sitka, AK 99835. Ph (907) 747-8168. I am an executive committee member of the Central Council Tlingit & Haida Indians of Alaska. As a Tribal Government we are in charge of all our Tribal Government affairs when the general assembly is not in session. Our tribal enrollment is over 18,000 members.

It is understandable that building many miles of logging roads is necessary for transporting logs to the log dumps. The proposal to build 67 miles of roads will again revive some objections from nearby villagers who are impacted by hunters using ATVs. I believe that Alaska Department of Fish & Game has also been concerned as far as impacting the brown bear population, and also contends that the marten population is down. These logging roads do intensify hunting and trapping activity. It has also been reported that some hunters take only the hind quarters and leave the rest of the deer carcasses to rot. I think the roads itself have little or no effect on wildlife population. But, easy access for motorized hunting is detrimental to mainly the deer population and severely impacts some of the villagers who hunt by hiking.

I personally don't have any problems with log dumps as presently existing. I do object to unit 246 as a cutting unit. You may recall how a large number of Sitka residents opposed any and all logging proposals in Hoonah sound. A Friends of Hoonah Sound was created. This group can become active again. Unit 246, as part of the Southeast Chichagof study area, if any logging proposals designates some logging in this unit, it will be deemed as an encroachment by piece meal into Hoonah sound. The beauty and it's high recreation value is still intact and many will be heard and possibly revive Friends of Hoonah Sound if logging is proposed. Along with the scenic beauty and the recreational activity is the importance of subsistence.

Near the edge of Unit 246 (as shown on maps in the EIS) is the site of my family and grand parents and their grandparents campsite known as "Wut tuh teen". My parents and grandparents used this site until many parents were threatened with having their children taken away, because many simply took their children out of school for about 3 to 4 weeks during the fall coho (silvers) run. "Wut tuh teen" valley drainages are class 1 salmon streams. I haven't noted any logging proposals in Unit 246, it is hoped that there won't be any.

All sockeye lakes & streams should be fully protected from logging. For example, I refer to Sitkoh Lake. My previous testimonies mentioned the waters in the lakes temperature began to rise, due to all drainage into the lake were exposed to open sky. When I mention this fact, I was told that, warmer waters enhances

the growth of the sockeye salmon. We used to be allowed 50 sockeye, instead of the warmer ^{water} enhancing the rapid growth, the sockeye runs began to diminish. Our bag limit was cut to 10 fish, then finally closed. In addition, after logging around the lake, the decaying of slash, sawdust and bark, it caused a thick slimy algae growth in the creek, the river bed used to be all grey gravel, eventually it was near impossible to wade in the river bed due to the slimy algae.

Sitkoh lake and creek, I have known as a major (red salmon) sockeye stream. Several families used to move to Chatham for the summer fishing season. Also, ^{to} nearby canneries i.e. Todd cannery, Hood Bay Packing Co. and Superior Packing in Tenakee Inlet used to be occupied by families from Angoon, Tenakee Springs, Juneau and Sitka. This meant that quite a few families had smokehouses. Sockeyes were taken by beach seines, spear and gaff hooks. The sizes of the smokehouses could accommodate probably 40 to 50 salmon. The larger handling up to 80 or near a hundred. Most of Sockeye salmon for these smokehouses came from Chatham and Basket Bay. For smoked sockeye to keep longer in dry storage, river or lake harvest is preferred, modern canning also became important as a method of storing fish. It is also known that some commercial purse seiners used to rob these creeks. In spite of this intensive harvest, the cycle of returning salmon remained as stable. It is very evident that the logging done around Sitkoh Lake affected the sockeye salmon escapement. So, Kook Lake should be spared from logging. Sitkoh Lake be allowed regrowth and ban further logging.

Mark Jacobs, Jr.

I think the program of fertilizing sockeye salmon lakes by the Forest Service is highly successful. Redoubt Lake fertilizing is the best example; However, when this program was proposed for Sitkoh Lake, we had to oppose it because of government financing other commercial gear wanted an allocation. We also opposed construction of a fish weir for the purpose of counting fish escapement. As in the past, it would most likely be an 8 hour a day counting. Most sockeyes migrate upstream during the night or dusk, also high water caused by heavy or steady rainfall. Sockeyes are adept at hiding under logs and stumps in the river, also in deep dark pools. All sockeye lakes and streams are claimed as Clan property, usually by rock carvings or petroglyphs.

As Sitka residents, we have already been severely impacted by logging in Sitkoh Bay, because of the depleted sockeye salmon. Bag limits have been reduced and further restricts the number of days sockeyes can be taken. Sitka is eliminated completely and Angoon's residents are reduced to 10 fish. More harvest pressure is put on Basket Bay, so Kook Lake water shed should never be logged. Sitkoh Lake should also be out of bounds for logging, and areas that have been previously logged should be allowed to regenerate naturally, or if seeded, fertilizers to speed up regrowth should be avoided.

I have previously testified that when I served as an Interim Director in the fledgling native corporation incorporated as Shee Atika', I personally worked several months in nominating lands in Hoonah sound for our land selections in accordance with the

provisions in ANCSA. We were allowed to identify up to three times the acreage specified in the act as our entitlement. I chose not to seek election to the Shee Atika' board because I was already serving as a director on the Southeast Regional Board, Incorporated as Sealaska. After the election of a new Shee Atika' board I was asked to travel to Juneau, BIA office to work on new selections in Hood Bay and Chaik (Indian pronunciation is more like "Gee Yeek"). I was to assist a land engineer loaned by the Forest Service. This raised a lot of questions in my mind - who will select our lands? When I made some inquiries, I learned Hoonah sound would not be or never allowed to be logged. So Shee Atika' board was convinced to nominate selections elsewhere. For this reason I will always oppose logging activities in the Hoonah sound region in its entirety.

In view of the 50 years cutting contract with ALP my personal preference would be alternative "E" or "F". This appears to protect lakes and rivers, and also it would be away from beach areas. However, I reiterate, sockeye salmon lakes should be protected from any and all logging activities in the drainage areas. The 100 foot buffer zone specified in TTRA is inadequate for keeping these lakes at its natural temperature.

I would also like to point out figure S-2 on page 5 of DEIS summary, referred to as Southeast Chichagof project, VCU's includes numbers unit 247 and 248 with number 246 shaded as part of this project. I would be opposed to any logging activities in the entire Hoonah sound area. It is a very important recreational and

subsistence area. Recreation include scenic beauty, habitat protection, wildlife, protected harbors and waterways. Hoonah Sound should be kept as status quo. By status quo I mean the area should have free navigation, subsistence and sport fishing, hunting, scenic viewing, camping and hiking. There should be no rules and regulations to restrict these activities for simple reasons a whale was seen spouting or it's the absence. The same is true with bald eagles which are not an endangered species.

Thank you again for this opportunity to express my views.

Submitted

Mark Jacobs Jr

Mark Jacobs, Jr.
P.O. Box 625
Sitka, AK 99835

6

My name is Terry Kennedy and

I am a resident of Seldovia Springs. I live alot "off the land" - primarily feeding my family off the fish, crab, wallops and deer found here in the Inlet. Every year we go up to Seal Bay during the winter months and set up a temporary deer-hunting camp. This is how we get most of our meat - about 90% of our annual consumption. We also look for Halibut and Red Snapper just to the east of the mouth to Seal Bay during the Spring, Summer and Fall months, this is our favorite fishing spot, one which always catches us something. My family survives off the food we gather from Seldovia Inlet. The "preferred Alternative" under the new Tongass Land Management Plan (Draft Environmental Impact Statement (DEIS)) will ruin our hunting and fishing grounds. I am against this "Preferred Alternative" and want to go on record as such.

There has been a clear direction given by ANILCA that subsistence uses of renewable resources "shall be the priority consumptive uses of all such resources on the public lands of Alaska." But the USFS continues to give clearcutting the highest priority.

I am an artist and I recover the deer hides, bones and antlers that the hunters here in Seldovia usually throw away. I get these hides tanned into leather and make beads out of the bones and antlers, and turn them into retail items which I sell here in town and at various other local Eastern Communities.

(2)

If the Senatus-hut deer population decreases, which studies have clearly proven does happen in clearcutting the deer habitat - then you will be virtually taking my livelihood from me by taking deer away from Senahu. I will not only suffer by the absence of food on my table and materials for my artwork, but also on the loss of visiting hunters who will be restricted from hunting here due to the result of our habitat losses. Last season alone I got 75% of my deer-materials from the out-of-town hunters who came here to hunt the deer. If they are restricted to come here to hunt I will lose all of those materials which their hunting here results in. Not to mention the loss of services these out-of-town hunters generate in our local economy.

It is my opinion that the proper way to manage our renewable resources is not to give unbalanced priority values to one group or activity resulting in the obvious destruction of other groups and activities in the shared area. The U.S.A.S. has been entrusted by all the people of the United States to properly manage our resources - equally balancing all of the activities including hunting, fishing, logging and tourism and to maintain these on equal levels for our future generations to participate in. I want my daughter to be able to

(3)

harvest the resources here in the inlet as we have done. But it is clear that there will not be the resources here for her within the next decade or two under your "preferred alternative."

Terry Kennedy

USFS Subsistence Hearing Southeast Chichagof DEIS
 Tenakee Spring At 948511 May 30, 1992
 Statement of Molly Kemp

I regret that I cannot attend this hearing and request that these comments be recorded.
 Release of the Southeast Chichagof DEIS and the comment period have coincided, as usual, with the busiest time of year for rural Southeast residents. Scheduling hearings right before a halibut opening - again! - reinforces the widespread perception that the Forest Service wants to minimize public participation.

Although I have not had time to review this document in detail, a quick examination reveals that the basic contradiction in USFS subsistence policy has not been resolved. The Forest Service has been forced to acknowledge that large scale logging operations have long term negative effects on fish & wildlife. The language of ANILCA and other federal laws clearly directs management of the Tongass away from the single-minded emphasis on timber production. But when it comes down to management decisions the Forest Service still gives logging the highest priority, and passes off subsistence concerns by telling local people to "exclude other users or go somewhere else."

Page 3-69 provides a description of subsistence and the clear direction in ANILCA that subsistence uses of renewable resources "shall be the priority consumptive uses of all such resources on the public lands of Alaska."

-2-

That description is followed by maps & charts derived from the TRUS survey. Even a cursory examination reveals some glaring inaccuracies. In those illustrations for example page 3-27 "Marine Invertebrate Harvest" shows no use of areas (such as east of Graveyard Island) that are heavily fished for crab and excluded from commercial fishing because of their importance to sport/subsistence users. Another example is the map of "Salmon Harvest" (page 3-78) showing areas where "one or more households ever harvest salmon" - and which completely excluded Tenakee Inlet.

I was disappointed to find that the section on deer has no reference to the ADF+G "Strategic Plan for Management of Deer - Population Objectives". That document gives a detailed analysis of the entire south shore ^{of Tenakee Inlet} and concludes that hunter ~~exp~~ demand already exceeds habitat capability in NAA 3629 (Crab Bay to Long Bay).

It is very annoying to find statements such as the last paragraph of DEIS Appendix A-11 which blithely assures us that Kudashan has so much "excess production" that it can accommodate all the hunters displaced by habitat loss elsewhere. Evidently who ever wrote that paragraph didn't read page 4-141, which spells out the future quite plainly.

3
Page 4-141 states that within the range of ^{activities} proposed habitat reduction there "will be sufficient deer for subsistence use in Tondue's primary hunting area through the year 2000 but insufficient deer available for both subsistence and non-subsistence use by the year 2010". There is "a significant possibility of a significant restriction of subsistence use of deer for Tondue residents."

I guess we're supposed to be grateful that the Forest Service has finally acknowledged that clearcutting negatively affects subsistences. However, the solutions to this conflict proposed on page 141 do not fill me with gratitude. The Forest Service suggests restricting non-subsistence hunting (which cannot occur until the population is already severely reduced) or hunting somewhere else. In other words - "Tough Luck! ~~Forests~~ APC comes first!"

I was very interested in the discussion of the APC contract on pages 4+5, which attempts to justly satisfy APC's appetite over all other considerations. I remember very clearly the USFS's spirited defence of the long term contracts throughout the debate over Tongass reform, and the claim "We can have it all in the Tongass!" What a difference it would have made if the Forest Service had gone to Congress with the truth - that every other value has been and will be sacrificed

4
by the time the contracts have run their course there are some interesting points made in the course of this discussion, such as how the Native Corporations are selling their timber at prices much higher than APC can afford, while the U.S. government continues to prop up APC with "federal appropriations legislation". Or the revelation that even British Columbia has a new policy as stated by the Forestry Minister: "Our main objective is to use B.C. Timber to manufacture wood products in this province." When is the ~~the~~ U.S. Forest Service going to wake up and smell the pulp mill?

CX

Alaska National Interest Lands Conservation Act (ANILCA)
Section 810 Subsistence Hearings

Alaska Pulp Corporation Long-term Timber Sale Contract
Southeast Chichagof
Draft Environmental Impact Statement

Comment Form

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Logging in this area improves the game
habitat by creating more browse for the
deer to eat.
The regrowth is coming back ~~and~~ really
good in these past logging areas giving a
nice look to the old land.
There is a lot of blow down timber, dead &
rotting timber that should be utilized as
wood, a possible to prevent a total loss
of a valuable resource.
If Human beings need wood products for housing
packaging & paper products. Since in charge of
managing the resource must make available
plenty of lower material to meet the demand

Thank You

Timothy W. Kidd
P.O. Box 500
Sitka AK 99835

Mail this form to:
USFS Southeast Chichagof Planning Team
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204 Signaka Way
Sitka, AK 99835

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ADDITIONAL

STATEMENT BY CRAIG MAPES FROM TENAKEE SPRINGS

GIVEN THE ALTERNATIVES MY 1ST CHOICE REMAINS
ALTERNATIVE A BUT MY SECOND CHOICE WOULD BE
ALTERNATIVE C AS THERE ARE FEWER MILES OF ROAD
CONSTRUCTED AND FEWER NEW ACRES OF CLEARCUTTING IN ALT. C
ADDITIONALLY I DO NOT WANT TO SEE ANY ROAD CONNECTIONS
TO PERIL STRAIGHT FROM TENAKEE INLET (IE. CARS MAY TO PERIL
OR COME BY TO PERIL). I DO NOT LIKE THE ROADING IN
SOUTHEAST BY DE CARS MAY SO FROM THIS RESPECTIVE
THE NON-CONSTRUCTION OF THESE RAYS AS IN ALTERNATIVE F WOULD
BE DESIRABLE. ACTUALLY I WOULD LIKE TO EMPHASIZE
THAT NO ADDITIONAL OR ANY ROADS BE BUILT IN SOUTHERN
CRAIG, SEAL, LOW RAYS AND ANY RAYS IN COUSE FEARS.

Craig R. Mapes

6-18-92

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CX

2
continues

Alaska National Interest Lands Conservation Act (ANILCA)
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29

I used to live on Chichagof Island in the '50s and a more beautiful place would be hard to find. The brown bears were plentiful then but I've learned that since logging many areas, their numbers have seriously declined. The logical result of lost habitat. If your house is destroyed, you can buy a new one somewhere else and buy food at a different store. With animals it's not so easy. Some starve, some are shot when people and bears get too close together.

I prefer alternative 2: no action - no further harvest. Because tourism is Alaska's fastest growing industry, we need to preserve the habitat of the animals & scenery that tourists come to see.

Another reason for preferring "no action" is that the 9 to 5:00 job life style is changing the life style that many people came to Alaska to live. Barter is alive and well in many small communities. People who like to hunt and fish share their bounty with those who can't very often. These natural resources mean food when funds might be scarce during the long winter months. These are "jobs" but ones that

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can be chosen by the individual instead of having to be at a particular machine at a particular time. Many people prefer the challenge of getting one's own meat and fish; living away from a city, away from pollution produced by pulp mills. The cry of jobs, jobs, jobs should not be the drummer that all Alaskans have to march to and every clearcut reduces people's choices by a small fraction but it is cumulative. Table S-3 shows Alternative reductions as quite small but every bear, deer, goat and fish lost from habitat reduction is a bear, deer, goat and fish that someone doesn't have to eat. People who have 9 to 5:00 jobs with 2 weeks paid vacation seem to think that that is preferred by all other people... it's just not the case as LPK and APC would have us believe.

In the Haines State Forest the premise was made that all roads would be "put to bed" when logging was finished but not one has been put to bed yet. The roads are used by All-Terrain-Vehicle owners who will shoot at anything that moves instead of hunting properly by the rules. If the same thing happens on Chichagof it's unfair to hunters & wildlife.

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continued

Alaska National Interest Lands Conservation Act (ANILCA) Section 810 Subsistence Hearings

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A.T.V. users call it "recreation" but regulation is nearly impossible.

At the Haines hearing a member of the team explained to me that helicopter logging was used in one of the alternatives. As messy as one local person said it looks from the air, I think it is preferable to building roads. All trees left on the ground became homes for insects, small animals and Squirrels and eventually turn into the soil from which more trees will grow. Never-the-less I still prefer Alternative 2.

I object to the state allowing the large mills to use the timber set aside for smaller mills. The set-aside timber should be left until smaller mills are ready to use it. However there are very few small mills left because of tactics which were used by the large mills against the Reid Brothers mill. The set-aside timber should remain as habitat for wildlife. The state should make it as easy for small mills to get lumber as it is for the large ones. I'm not against all logging but APC & LPK are logging too much too fast.

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Vivian Menaker
Lynn Canal Conservation
P.O. Box 964
Haines AK 99827

Chatham Area
IDT - SE Chichagof
Sitka, Alaska 99835

K.J. Metcalf
BX. 201 Angoon, 99820
June 16, 1992

Following is my statement I wish to be included in the record of the ANILCA 810 Angoon subsistence hearing.

I agree with the official position of the City of Angoon. In summary I believe;

1. The Forest Service has violated the National Environmental Policy Act (NEPA) by making an unfounded decision, prior to the NEPA process, to harvest at least 108 MBF in this project.
 2. This violation has led to a second violation of artificially constraining the range of alternatives presented.
 3. There is a obvious lack of any alternative that addresses the subsistence and economic needs of Angoon and Tenakee.
 4. Angoon's harvest, and therefore need, for deer is grossly understated in the Draft EIS. Angoon harvests over 800 deer per year. An estimated 40% are harvested on the west side of Chatham Strait. In 1991 deer harvest was lower due to fewer deer. The 1991 Angoon subsistence harvest fell short of the demand. This resulted in an economic and nutritional hardship for some Angoon families.
- The prediction that Angoon will be able to fill its subsistence needs in the immediate future is wrong. Past and present logging on Admiralty, Baranof and Chichagof has already severely constrained the ability of Angoon to subsist.
5. The predictions of impacts to subsistence are grossly understated in the DEIS analysis.

6. The Forest Service has once again insulted the people of Angoon by coming to them at the peak of fishing and subsistence activity. This can be translated as the Forest Service saying; "What you have to tell us is not very important, but the law says we must ask, so we are here to ask."

You are asking us to drop one of the few opportunities open to us to make money, so that we may meet with you to explain why we depend on subsistence, since we have so few opportunities to make money.

7. The Forest Service has a TRUST responsibility to the Indian Tribal Government. The SE Chichagof project will impact Angoon's cultural sites, subsistence and economic well-being.

CONCLUSION: The FS must do a supplement of the Draft to correct these major problems. That supplement must have an Alternative that addresses the needs of Angoon and Tenakee.

KJ Metcalf

Walter Soboleff

Alaska National Interest Lands Conservation Act (ANILCA)
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I have no problem with the manner
in which the U.S. Forest Service is carrying out its job as

steward of a great natural resource - the Chichagof

National Forest. I commend the U.S. Forest

Service.

Walter Soboleff 6/17/92 7:35pm.

Unalakleet, Alaska 99854

Mail this form to:
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204 Signakwa Way
Sitka, AK 99835

James Sigler

Alaska National Interest Lands Conservation Act (ANILCA)
Section 810 Subsistence Hearings

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I picked logging as my occupation 30 years ago
in the state of Alaska because I preferred hard physical
labor.

For the last 11 years I've pretty much been working
for the logging corporation of Chichagof, and now that
their timber is becoming the end of the long-term
contract with both APCHT & PC, it's very important to
me and they are also very important to the hundreds
of people that my good friend makes a job for, I'm at the
very bottom of the harvest for a while.

The old growth timber in Chichagof Alaska is very
much over size and once we get the older timber
cut and logged and a new forest starts, the volume per
acre will be much more in 100 years or whenever it
is logged again.

There are hundreds of people calling the songs in Chichagof
and looking for work in the logging industry, and they
still find one of them that can't find work and can't
find a job but it would be if the long-term timber sales
are restricted in the future.

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204 Signakwa Way
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James R. Sigler
PO Box 7631
Ketchikan, Alaska
99901

Alaska National Interest Lands Conservation Act (ANILCA)
Section 810 Subsistence Hearings

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MY CONCERN IS THAT THE METHOD FOR ANALYZING SUBSISTENCE DATA FROM THE HAINES AREA IS NOT FLEXIBLE ENOUGH TO REFLECT THE DRAMATIC CHANGES OF THE LAST 2 YEARS INCLUDING (A) SUBSISTENCE RESOURCES (OTHER THAN CHICHAGOF DEER) AND (B) THE EMPLOYMENT ECONOMIC DIFFICULTIES IN THIS AREA, DESPITE THE GOOD INTENTIONS OF THE DESIGNER(S) OF THE DATA ANALYSIS SYSTEMS, AS WELL AS THOSE OF THE PUBLIC SERVANTS WHO INTERPRET & APPLY THIS DATA (AND FORM REGULATIONS). IT LACKS THE FLEXIBILITY TO APPLY THE DATA AVAILABLE ABOUT THE LAST 2 YEARS' DECREASE IN MOOSE POPULATION AND THE RESULTANT RESTRICTIONS. NOW DOES IT TAKE INTO ACCOUNT THE CLOSURE OF THE MILLS HERE AND THE RIDDLE EFFECT OF THAT MUCH LESS CASH FLOW IN THIS AREA.

THEREFORE, IT WOULD BE PRUDENT TO DELAY THE DECISION ABOUT WHICH OPTION TO USE UNTIL THIS VERY PERTINENT DATA ABOUT GAME AVAILABILITY & ECONOMIC HARDSHIP CAN BE INCORPORATED INTO THE ANALYSIS. SURELY IT WOULDN'T TAKE RATTALONG TO DO THIS, AND IT IS QUITE IMPORTANT TO THE SURVIVAL OF A SIGNIFICANT PORTION OF THE POPULATION.

Mail this form to:

USFS Southeast Chichagof Planning Team
ATTN: Subsistence Hearings
204 Signaka Way
Sitka, AK 99835

A WRITTEN RESPONSE WOULD
BE APPRECIATED. THANK YOU.

SINCERELY,
DAVID SNEED
PO BOX 502
HAINES AK 99827

Tenakee Springs Fish & Game
Advisory Committee

Tenakee Springs Fish and Game Advisory Committee

RESOLUTION 92-03

Before the Committee

June 12, 1992

A RESOLUTION CONCERNING THE AVAILABILITY OF DEER FOR SUBSISTENCE USE.

WHEREAS, it is mandated by the Tongas Timber Reform Act that uses other than timber be given equal consideration; and

WHEREAS, the ANILCA section 810 subsistence evaluation for the Southeast Chichagof Project Area has produced a finding of a significant possibility of a significant restriction on the subsistence use of deer in the project area; and

WHEREAS, deer populations in the project area are already very depressed due to recent hard winters and habitat losses; and

WHEREAS, the subsistence use of deer is of extreme personal, social, cultural, and economic importance to the citizens of Tenakee Springs; and

WHEREAS, the proposed activities of the Forest Service in the project area will likely cause a drastic reduction in the availability of deer for subsistence use;

THEREFORE BE IT RESOLVED that any activities that negatively affect the availability of deer for subsistence use are totally unacceptable to the citizens of Tenakee Springs; and

THEREFORE BE IT FURTHER RESOLVED that the Tenakee Springs Fish and Game Advisory Committee requests the Forest Service to reinstate Seal Bay and Long Bay area to LUD II classification and expand the area to include Goose Flats and the head of Tenakee Inlet.

ADOPTED THIS 12TH DAY OF JUNE 1992

Samuel E. McBeen
Samuel E. McBeen
Committee Chairman

Rocky Walker

Alaska National Interest Lands Conservation Act (ANILCA)
Section 810 Subsistence Hearings

Alaska Pulp Corporation Long-term Timber Sale Contract
Southeast Chichagof
Draft Environmental Impact Statement

Comment Form

The U. S. Forest Service is obtaining public comments on the Southeast Chichagof Environmental Impact Statement for the Alaska Pulp Corporation Long-term Timber Sale contract. You may use as many of these forms as necessary to provide written comments in addition to or in place of your public testimony. Either submit the form at the public hearing or mail it to the Forest Service by June 26, 1992.

WE NEED ENOUGH WOOD FOR ME. SO WE CAN KEEP
RUNNING THE MILLS. OPS MEAN MORE TO THE PEOPLE,
CAUSE OUR LOGGING PRACTICES DO NOT HARM THE
DEER.

I'M A FOUR TIME GENERATION LOGGER AND I CONSIDER
MYSELF AND MY CO-WORKERS PROFESSIONAL TIMBER
WORKERS. AND I BELIEVE IT TAKES A PROFESSIONAL
TO OBEY BY FOREST SERVICES SPECIFICATIONS
IF YOU STOP THESE LONG-TERM LOGGING CONTRACTS,
THEN IT WOULD BE NECESSARY FOR MY CO-WORKERS
AND I TO FIND ANOTHER TRADE. THERE FOR WHEN
YOU DECIDE TO RE-OPEN THE TIMBER SALES AGAIN,
MY CO-WORKERS AND I WILL NOT BEWARE TO COME
AND WORK IN THE WOODS. SO THEN YOU'LL HAVE
UNEXPERIENCED TIMBER WORKERS TO WORK WITH.
I PROMISE YOU THAT A GOOD JOB WON'T BE DONE.
THE OTHER WOODS - IT WILL BE TO DOWN LATE,
TO START IT BACK UP AGAIN. GOD ONLY KNOWS
WE NEED WOOD PRODUCTS. PLEASE PROVIDE ENOUGH

TIMBER FOR ME SO I CAN KEEP MY JOB.

Mail this form to:

USFS Southeast Chichagof Planning Team
ATTN: Subsistence Hearings
204 Sigina Way
Sitka, AK 99835

THANK YOU

Rocky Walker

Appendix E

Subsistence



**Deer Harvest Data in
Southeast Chichagof
Project Area by
Community, WAA, and Year**

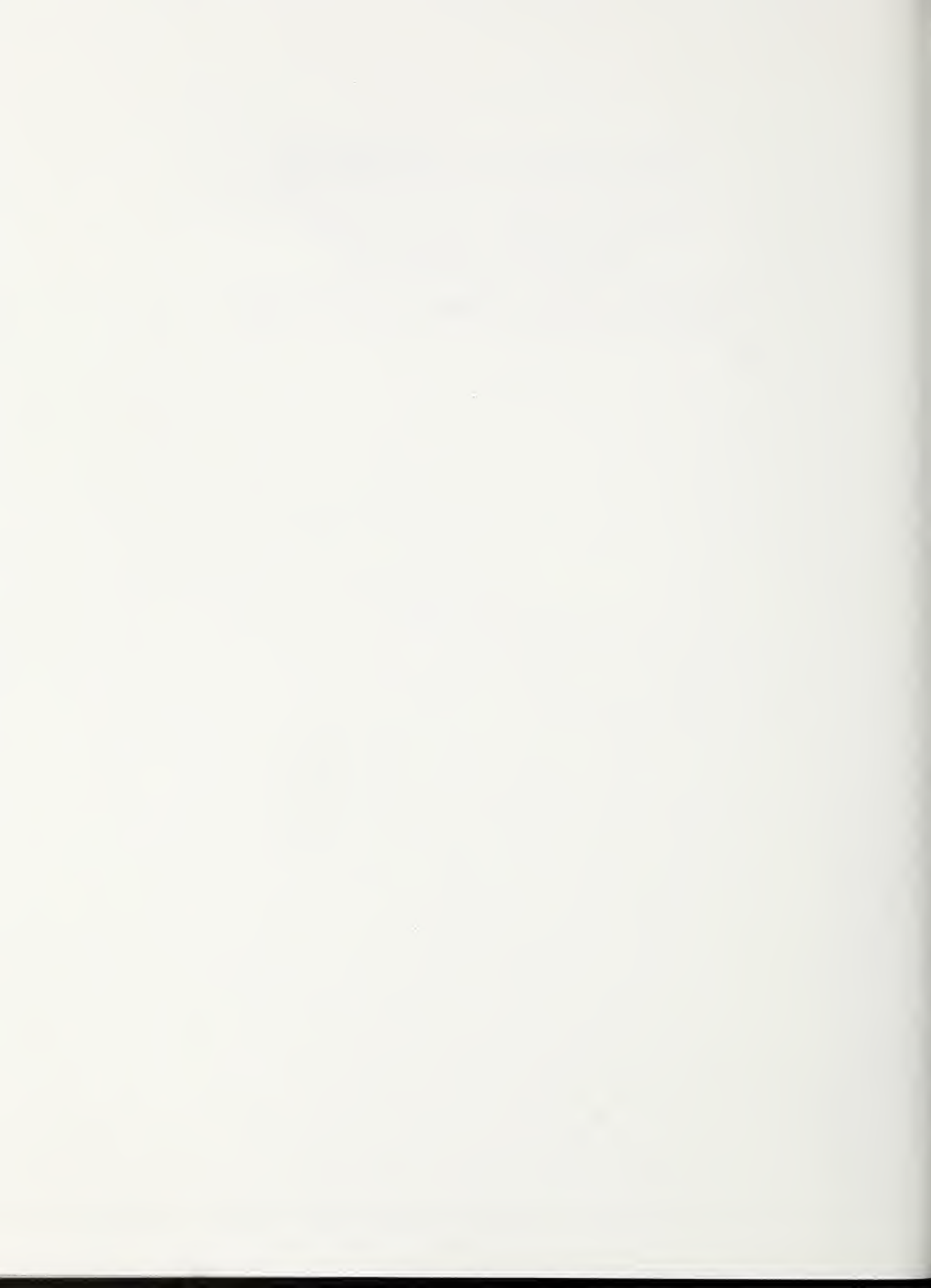


Table E-1

Deer Harvest Data in Southeast Chichagof Project Area by Community, WAA, and Year

Deer harvests in SE Chichagof Plan Area								
3/4/92 11:18								
	Angoon	1987	1988	1989	1990	4-yr. total	4-yr. average	% from WA
Angoon	3308	41	13	46		100	25	8%
Angoon	3309					0	0	0%
Angoon	3627		3	10		13	3	1%
Angoon	3628					0	0	0%
Angoon	3629					0	0	0%
Angoon	3630					0	0	0%
Angoon	other	454	187	228	275	1144	286	89%
Angoon	TOTAL	495	235	284	275	1289	322	100%
	Haines	1987	1988	1989	1990	4-yr. total	4-yr. average	% from WA
Haines	3308					0	0	0%
Haines	3309					0	0	0%
Haines	3627		14			14	4	1%
Haines	3628	13	23			36	9	2%
Haines	3629	69	52	17		138	35	8%
Haines	3630	39	19	21	22	101	25	6%
Haines	other	340	353	315	331	1339	335	82%
Haines	TOTAL	461	461	353	353	1628	407	100%
	Hoonah	1987	1988	1989	1990	4-yr. total	4-yr. average	% from WA
Hoonah	3308					0	0	0%
Hoonah	3309					0	0	0%
Hoonah	3627					0	0	0%
Hoonah	3628					0	0	0%
Hoonah	3629					0	0	0%
Hoonah	3630					0	0	0%
Hoonah	other	749	656	531	892	2828	707	100%
Hoonah	TOTAL	749	656	531	892	2828	707	100%
	Juneau	1987	1988	1989	1990	4-yr. total	4-yr. average	% from WA
Juneau	3308	54	50	50	62	216	54	1%
Juneau	3309	15	25	5	74	119	30	1%
Juneau	3627	44	75	65	40	224	56	1%
Juneau	3628	20	44	10	23	97	24	1%
Juneau	3629	224	150	110	68	552	138	3%
Juneau	3630	44	6	15	6	71	18	0%
Juneau	other	4549	3648	3506	3940	15643	3911	92%
Juneau	TOTAL	4950	3998	3761	4213	16922	4231	100%
	Kake	1987	1988	1989	1990	4-yr. total	4-yr. average	% from WA
Kake	3308					0	0	0%
Kake	3309					0	0	0%
Kake	3627					0	0	0%
Kake	3628					0	0	0%
Kake	3629					0	0	0%
Kake	3630					0	0	0%
Kake	other	164	288	147	264	863	216	100%
Kake	TOTAL	164	288	147	264	863	216	100%

Table E-1 (Continued)

Deer Harvest Data in Southeast Chichagof Project Area by Community, WAA, and Year

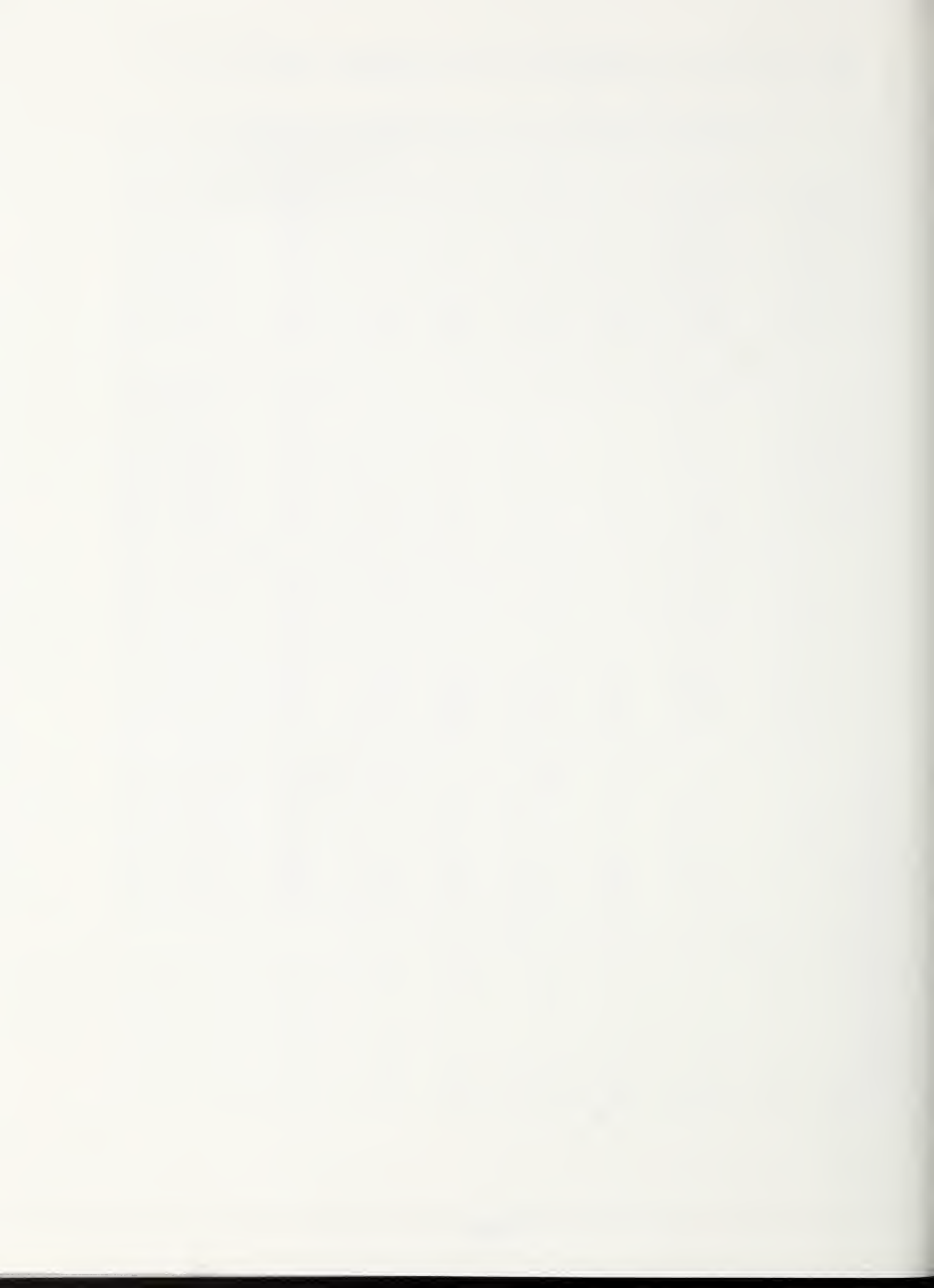
Deer harvests in SE Chichagof Plan Area								
3/4/92 11:18								
	Ketchikan	1987	1988	1989	1990	4-yr. total	4-yr. average	% from WA
Ketchikan	3308	6		20	21	47	12	1%
Ketchikan	3309					0	0	0%
Ketchikan	3627				14	14	4	0%
Ketchikan	3628					0	0	0%
Ketchikan	3629			10		10	3	0%
Ketchikan	3630				7	7	2	0%
Ketchikan	other	1999	1640	1544	1689	6872	1718	99%
Ketchikan	TOTAL	2005	1640	1574	1731	6950	1738	100%
	Meyers Chuck	1987	1988	1989	1990	4-yr. total	4-yr. average	% from WA
Meyers Chuck	3308					0	0	0%
Meyers Chuck	3309					0	0	0%
Meyers Chuck	3627					0	0	0%
Meyers Chuck	3628					0	0	0%
Meyers Chuck	3629					0	0	0%
Meyers Chuck	3630					0	0	0%
Meyers Chuck	other	21	18	17	17	73	18	100%
Meyers Chuck	TOTAL	21	18	17	17	73	18	100%
	Other	1987	1988	1989	1990	4-yr. total	4-yr. average	% from WA
Other	3308	16			5	21	5	0%
Other	3309	3				3	1	0%
Other	3627		5	18	11	34	9	0%
Other	3628				5	5	1	0%
Other	3629		8		32	40	10	0%
Other	3630			4		4	1	0%
Other	other	3256	2588	3018	3259	12121	3030	99%
Other	TOTAL	3275	2601	3040	3312	12228	3057	100%
	Petersburg	1987	1988	1989	1990	4-yr. total	4-yr. average	% from WA
Petersburg	3308	111		28	20	159	40	3%
Petersburg	3309			46	30	76	19	1%
Petersburg	3627					0	0	0%
Petersburg	3628					0	0	0%
Petersburg	3629					0	0	0%
Petersburg	3630					0	0	0%
Petersburg	other	1328	1180	1028	1484	5020	1255	96%
Petersburg	TOTAL	1439	1180	1102	1534	5255	1314	100%
	Sitka	1987	1988	1989	1990	4-yr. total	4-yr. average	% from WA
Sitka	3308	133	123	43	47	346	87	2%
Sitka	3309	172	136	144	267	719	180	4%
Sitka	3627		6			6	2	0%
Sitka	3628					0	0	0%
Sitka	3629	111			12	123	31	1%
Sitka	3630					0	0	0%
Sitka	other	5296	4473	3471	3825	17065	4266	93%
Sitka	TOTAL	5712	4738	3658	4151	18259	4565	100%

Table E-1 (Continued)

Deer Harvest Data in Southeast Chichagof Project Area by Community, WAA, and Year

Deer harvests in SE Chichagof Plan Area								
3/4/92 11:18								
	Skagway	1987	1988	1989	1990	4-yr. total	4-yr. average	% from WA
Skagway	3308					0	0	0%
Skagway	3309					0	0	0%
Skagway	3627					0	0	0%
Skagway	3628					0	0	0%
Skagway	3629			19	2	21	5	15%
Skagway	3630					0	0	0%
Skagway	other	37	10	30	41	118	30	85%
Skagway	TOTAL	37	10	49	43	139	35	100%
	Tenakee Sp.	1987	1988	1989	1990	4-yr. total	4-yr. average	% from WA
Tenakee Sp.	3308					0	0	0%
Tenakee Sp.	3309					0	0	0%
Tenakee Sp.	3627	2	8	2	11	23	6	6%
Tenakee Sp.	3628	9	4		5	18	5	4%
Tenakee Sp.	3629	12	22	18	13	65	16	16%
Tenakee Sp.	3630	17	6		4	27	7	7%
Tenakee Sp.	other	81	73	63	54	271	68	67%
Tenakee Sp.	TOTAL	121	113	83	87	404	101	100%
	Wrangell	1987	1988	1989	1990	4-yr. total	4-yr. average	% from WA
Wrangell	3308				5	5	1	0%
Wrangell	3309					0	0	0%
Wrangell	3627					0	0	0%
Wrangell	3628					0	0	0%
Wrangell	3629					0	0	0%
Wrangell	3630					0	0	0%
Wrangell	other	321	361	386	322	1390	348	100%
Wrangell	TOTAL	321	361	386	327	1395	349	100%
	All	1987	1988	1989	1990	4-yr. total	4-yr. average	% from WA
All	3308	361	186	187	160	894	224	26%
All	3309	190	161	195	371	917	229	27%
All	3627	46	111	95	76	328	82	9%
All	3628	42	71	10	33	156	39	5%
All	3629	416	232	174	127	949	237	27%
All	3630	100	31	40	39	210	53	6%
All	TOTAL	1155	792	701	806	3454	864	100%

Note: Boundaries for WAAs 3309 and 3630 changed slightly after 1988.



**Analysis of Changes in Land
Used for Subsistence by
More than 5 percent of
Community Households for
Rural Communities Utilizing
the Project Area**



Table E-2
Analysis of Changes in Land Used for Subsistence by Angoon
(in Acres)

[illegible]

Table E-3

Analysis of Changes in Land Used for Subsistence by Angoon (in Percent)

Percentage		Percentage							
Acreage Used By		Of Acreage Used By More Than 5% of Community Households:							
Area	More Than 5% of Community Households	Acreage Cut Since 1965 Or Roaded	Acreage Approved For Cut	Acreage Proposed for Cuts or Roads Under Alternative:					
				A	B	C	D	E	F
Chatham Region									
Project Area									
Wildlife Analysis Unit									
3629	0%								
3309	0%								
3308	8%	25%				1%	1%	0%	
3627	6%	0%							
3628	0%								
3630	0%								
3310	0%								
3311	0%								
3312	0%								
3313	7%	7%							
3315	25%	11%							
3419	0%								
3523	0%								
3526	2%	1%							
4253	0%								
Value Comparison Unit									
227	0%								
228	0%								
229	0%								
230	0%								
231	0%								
232	0%								
233	0%								
234	0%								
235	0%								
236	0%								
237	16%								
238	6%	1%							
239	7%	6%				0%		0%	
240	3%						1%		
241	8%	39%				5%	5%		
242	10%	5%				0%	0%		
243	10%	26%				0%	0%		
244	2%	14%							
245	13%	38%				0%	0%		
246	0%								

Table E-5

Analysis of Changes in Land Used for Subsistence by Haines (in Percent)

Percentage		Percentage							
Acreage Used By		Of Acreage Used By More Than 5% of Community Households:							
Area	More Than 5% of Community Households	Acreage Cut Since 1965 Or Roaded	Acreage Approved For Cut	Acreage Proposed for Cuts or Roads Under Alternative:					
				A	B	C	D	E	F
Chatham Region									
Project Area									
Wildlife Analysis Unit									
3629	1%	2%			2%	2%	1%	1%	
3309	0%								
3308	2%	66%							
3627	0%								
3628	1%								
3630	0%								
3310	0%								
3311	0%								
3312	2%								
3313	0%								
3315	0%								
3419	0%								
3523	1%								
3526	1%	48%							
4253	4%	3%							
Value Comparison Unit									
227	0%								
228	0%								
229	0%								
230	0%								
231	0%								
232	2%								
233	1%	20%			6%	6%	6%	6%	
234	11%				2%	2%	1%		
235	1%								
236	0%								
237	0%								
238	0%								
239	0%								
240	0%								
241	0%								
242	0%								
243	0%								
244	7%	53%							
245	4%	77%							
246	0%								
247	0%								

Table E-7

Analysis of Changes in Land Used for Subsistence by Hoonah (in Percent)

Percentage		Percentage							
Acreage Used By		Of Acreage Used By More Than 5% of Community Households:							
Area	More Than 5% of	Acreage Cut	Acreage	Acreage Proposed for Cuts or Roads Under Alternative:					
	Community	Since 1965	Approved						
	Households	Or Roaded	For Cut	A	B	C	D	E	F
Chatham Region									
Project Area									
Wildlife Analysis Unit									
	3629	0%							
	3309	0%							
	3308	0%							
	3627	0%							
	3628	0%							
	3630	1%							
	3310	0%							
	3311	0%							
	3312	0%							
	3313	0%							
	3315	0%							
	3419	0%							
	3523	37%	3%	2%					
	3526	5%	11%	0%					
	4253	46%	1%						
Value Comparison Unit									
	227	0%							
	228	0%							
	229	0%							
	230	0%							
	231	0%							
	232	0%							
	233	0%							
	234	0%							
	235	0%							
	236	0%							
	237	1%							
	238	0%							
	239	0%							
	240	0%							
	241	0%							
	242	0%							
	243	0%							
	244	0%							
	245	0%							
	246	0%							
	247	0%							

Table E-9

Analysis of Changes in Land Used for Subsistence by Kake (in Percent)

Percentage		Percentage							
Acreage Used By		Of Acreage Used By More Than 5% of Community Households:							
Area	More Than 5% of Community Households	Acreage Cut Since 1965 Or Roaded	Acreage Approved For Cut	Acreage Proposed for Cuts or Roads Under Alternative:					
				A	B	C	D	E	F
Chatham Region									
Project Area									
Wildlife Analysis Unit									
	3629	0%							
	3309	0%							
	3308	0%	99%						
	3627	0%							
	3628	0%							
	3630	0%							
	3310	0%							
	3311	0%							
	3312	0%							
	3313	0%							
	3315	16%	9%						
	3419	0%							
	3523	0%							
	3526	0%							
	4253	0%							
Value Comparison Unit									
	227	0%							
	228	0%							
	229	0%							
	230	0%							
	231	0%							
	232	0%							
	233	0%							
	234	0%							
	235	0%							
	236	0%							
	237	0%							
	238	0%							
	239	0%							
	240	0%							
	241	0%							
	242	0%							
	243	0%							
	244	0%							
	245	1%	99%						
	246	0%							
	247	0%							

Analysis of Changes in Land Used for Subsistence by Meyers Chuck (in Acres)

[illegible]

Table E-11

Analysis of Changes in Land Used for Subsistence by Meyers Chuck (in Percent)

Percentage		Percentage							
Acreage Used By		Of Acreage Used By More Than 5% of Community Households:							
Area	More Than 5% of Community Households	Acreage Cut Since 1965 Or Roaded	Acreage Approved For Cut	Acreage Proposed for Cuts or Roads Under Alternative:					
				A	B	C	D	E	F
Chatham Region									
Project Area									
Wildlife Analysis Unit									
3308	0%								
3309	0%								
3310	0%								
3311	14%	21%				10%	10%	10%	11%
3312	0%								
3313	0%								
3315	0%								
3419	0%								
3523	0%								
3526	0%								
3627	19%	10%							
3628	0%								
3629	0%								
3630	0%								
4253	0%								
Value Comparison Unit									
227	0%								
228	0%								
229	0%								
230	0%								
231	0%								
232	0%								
233	0%								
234	0%								
235	0%								
236	35%	21%				10%	10%	10%	11%
237	0%								
238	0%								
239	0%								
240	0%								
241	0%								
242	0%								
243	0%								
244	0%								
245	0%								
246	0%								
247	0%								

Analysis of Changes in Land Used for Subsistence by Petersburg (in Acres)

[illegible]

Table E-13

Analysis of Changes in Land Used for Subsistence by Petersburg (in Percent)

Percentage		Percentage							
Acreage Used By		Of Acreage Used By More Than 5% of Community Households:							
Area	More Than 5% of Community Households	Acreage Cut Since 1965 Or Roaded	Acreage Approved For Cut	Acreage Proposed for Cuts or Roads Under Alternative:					
				A	B	C	D	E	F
Chatham Region									
Project Area									
Wildlife Analysis Unit									
	3629	0%							
	3309	0%							
	3308	1%	67%			1%	1%		
	3627	0%							
	3628	0%							
	3630	0%							
	3310	0%							
	3311	0%							
	3312	2%							
	3313	0%							
	3315	38%	8%						
	3419	0%							
	3523	0%							
	3526	0%							
	4253	0%							
Value Comparison Unit									
	227	0%							
	228	0%							
	229	0%							
	230	0%							
	231	0%							
	232	0%							
	233	0%							
	234	0%							
	235	0%							
	236	0%							
	237	0%							
	238	0%							
	239	0%							
	240	0%							
	241	0%							
	242	0%							
	243	0%							
	244	0%							
	245	6%	67%			1%	1%		
	246	0%							
	247	0%							

Table E-14
Analysis of Changes in Land Used for Subsistence by Sitka
(in Acres)

[illegible]

Table E-15

Analysis of Changes in Land Used for Subsistence by Sitka (in Percent)

Percentage		Percentage							
Acreage Used By		Of Acreage Used By More Than 5% of Community Households:							
Area	More Than 5% of Community Households	Acreage Cut Since 1965 Or Roaded	Acreage Approved For Cut	Acreage Proposed for Cuts or Roads Under Alternative:					
				A	B	C	D	E	F
Chatham Region									
Project Area									
Wildlife Analysis Unit									
	3629	0%							
	3309	0%							
	3308	0%	12%			2%	2%		
	3627	0%							
	3628	0%							
	3630	0%							
	3310	1%							
	3311	1%							
	3312	4%							
	3313	0%							
	3315	0%							
	3419	0%							
	3523	0%							
	3526	0%							
	4253	0%							
Value Comparison Unit									
	227	0%							
	228	0%							
	229	0%							
	230	0%							
	231	0%							
	232	0%							
	233	0%							
	234	0%							
	235	0%							
	236	0%							
	237	0%							
	238	0%							
	239	0%							
	240	0%							
	241	0%							
	242	0%							
	243	0%							
	244	0%							
	245	0%	12%			2%	2%		
	246	0%							
	247	0%							

Table E-17

Analysis of Changes in Land Used for Subsistence by Skagway (in Percent)

Percentage		Percentage							
Acreage Used By		Of Acreage Used By More Than 5% of Community Households:							
Area	More Than 5% of Community Households	Acreage Cut Since 1965 Or Roaded	Acreage Approved For Cut	Acreage Proposed for Cuts or Roads Under Alternative:					
				A	B	C	D	E	F
Chatham Region									
Project Area									
Wildlife Analysis Unit									
	3629	0%							
	3309	0%							
	3308	0%							
	3627	0%							
	3628	0%							
	3630	0%							
	3310	0%							
	3311	0%							
	3312	0%							
	3313	0%							
	3315	0%							
	3419	0%							
	3523	0%							
	3526	0%							
	4253	0%							
Value Comparison Unit									
	227	0%							
	228	0%							
	229	0%							
	230	0%							
	231	0%							
	232	0%							
	233	0%							
	234	0%							
	235	0%							
	236	0%							
	237	0%							
	238	0%							
	239	0%							
	240	0%							
	241	0%							
	242	0%							
	243	0%							
	244	0%							
	245	0%							
	246	0%							
	247	0%							

Table E-19

Analysis of Changes in Land Used for Subsistence by Wrangell (in Percent)

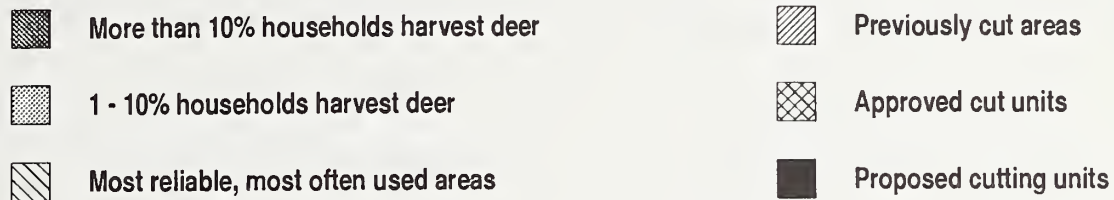
Area	Percentage	Percentage							
	Acreage Used By	Of Acreage Used By More Than 5% of Community Households:							
	More Than 5% of	Acreage Cut	Acreage	Acreage Proposed for Cuts or Roads Under Alternative:					
	Community	Since 1965	Approved						
	Households	Or Roaded	For Cut	A	B	C	D	E	F
Chatham Region									
Project Area									
Wildlife Analysis Unit									
	3629	0%							
	3309	0%							
	3308	0%							
	3627	0%							
	3628	0%							
	3630	0%							
	3310	0%							
	3311	0%							
	3312	0%							
	3313	0%	2%						
	3315	2%							
	3419	0%							
	3523	0%							
	3526	0%							
	4253	0%							
Value Comparison Unit									
	227	0%							
	228	0%							
	229	0%							
	230	0%							
	231	0%							
	232	0%							
	233	0%							
	234	0%							
	235	0%							
	236	0%							
	237	0%							
	238	0%							
	239	0%							
	240	0%							
	241	0%							
	242	0%							
	243	0%							
	244	0%							
	245	0%							
	246	0%							
	247	0%							

**Subsistence Use Areas by
Alternative for Rural
Communities**



Figure E-1

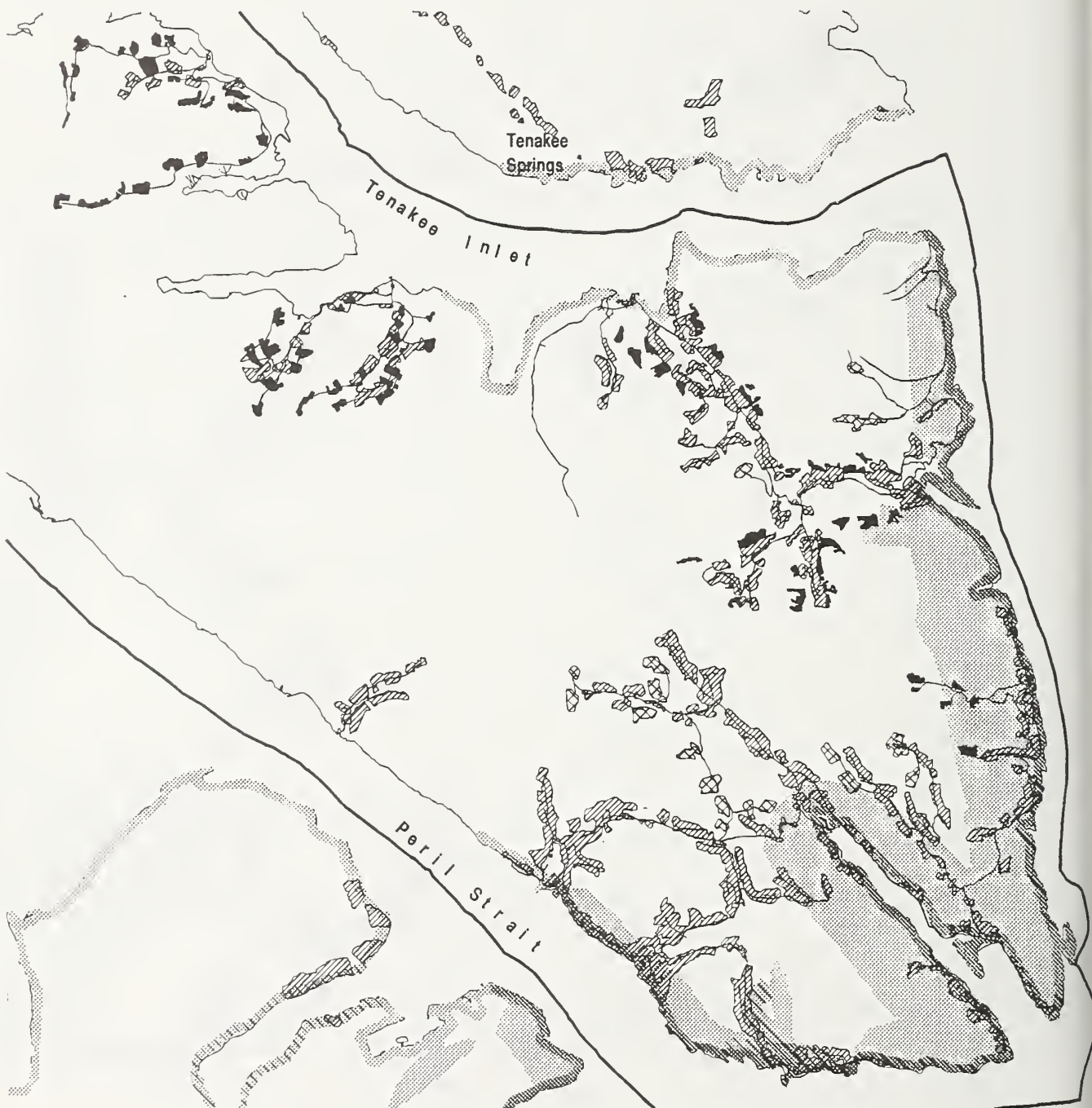
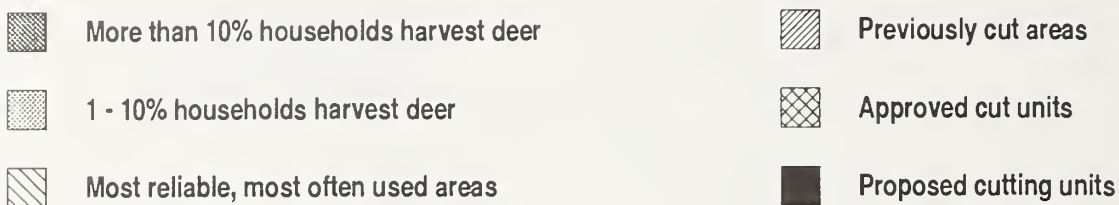
Southeast Chichagof Alternative B Angoon Subsistence Analysis



Mapscale 1:250000

Figure E-2







Southeast Chichagof Alternative C Angoon Subsistence Analysis



Mapscale 1:250000

Figure E-3

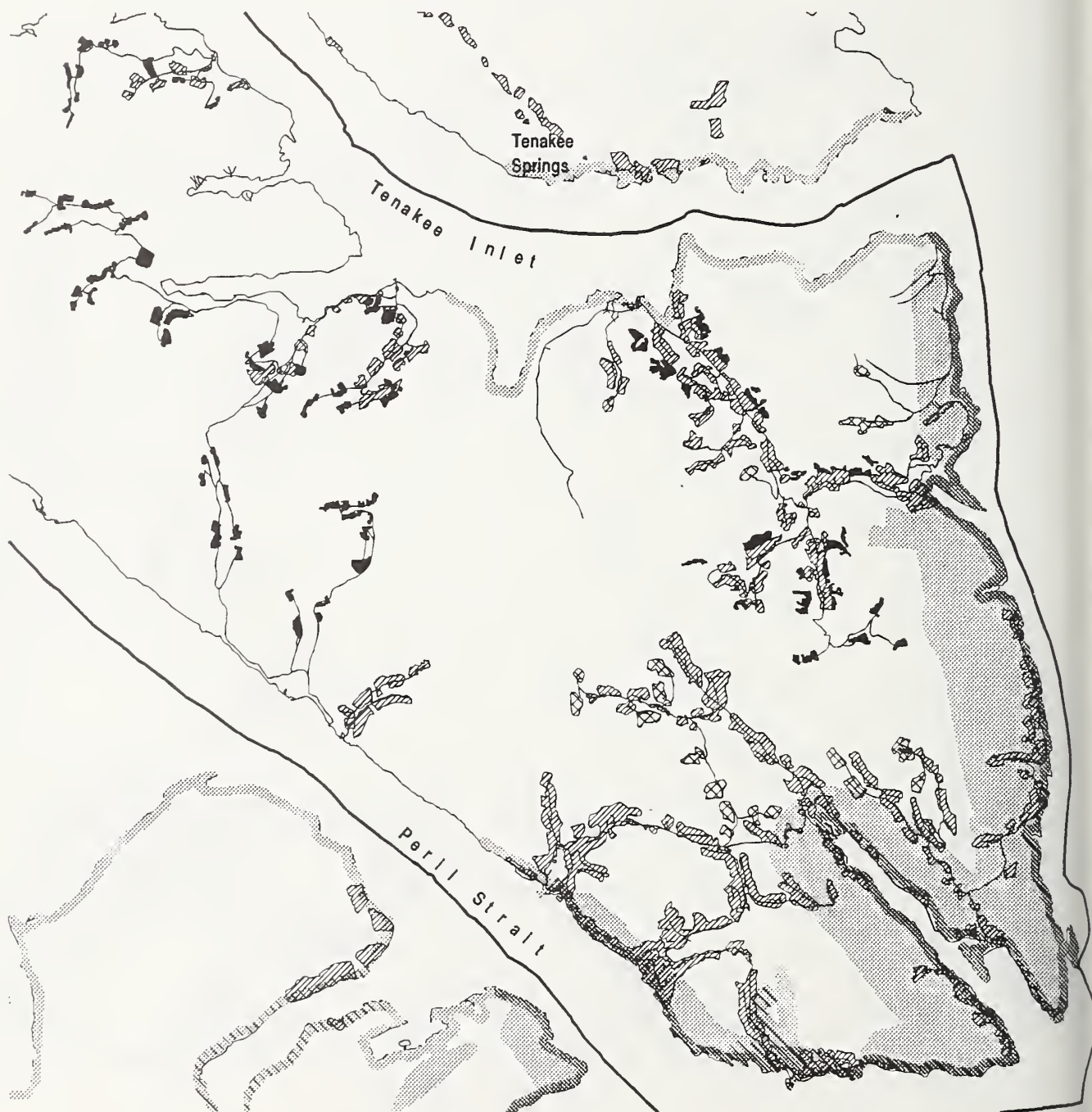
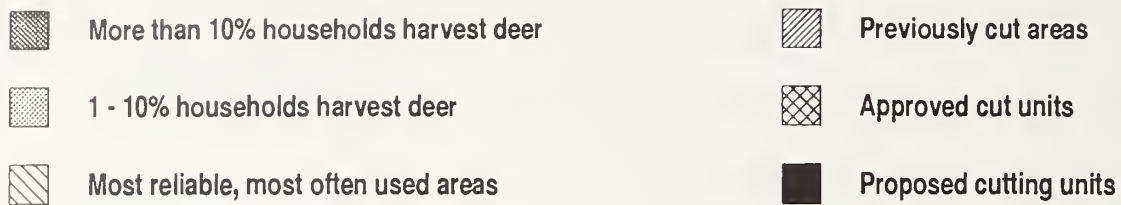
Southeast Chichagof Alternative D Angoon Subsistence Analysis

- | | | | |
|---|---------------------------------------|---|------------------------|
|  | More than 10% households harvest deer |  | Previously cut areas |
|  | 1 - 10% households harvest deer |  | Approved cut units |
|  | Most reliable, most often used areas |  | Proposed cutting units |



Mapscale 1:250000

Figure E-4
Southeast Chichagof Alternative E Angoon Subsistence Analysis



Mapscale 1:250000

Figure E-5
Southeast Chichagof Alternative F Angoon Subsistence Analysis







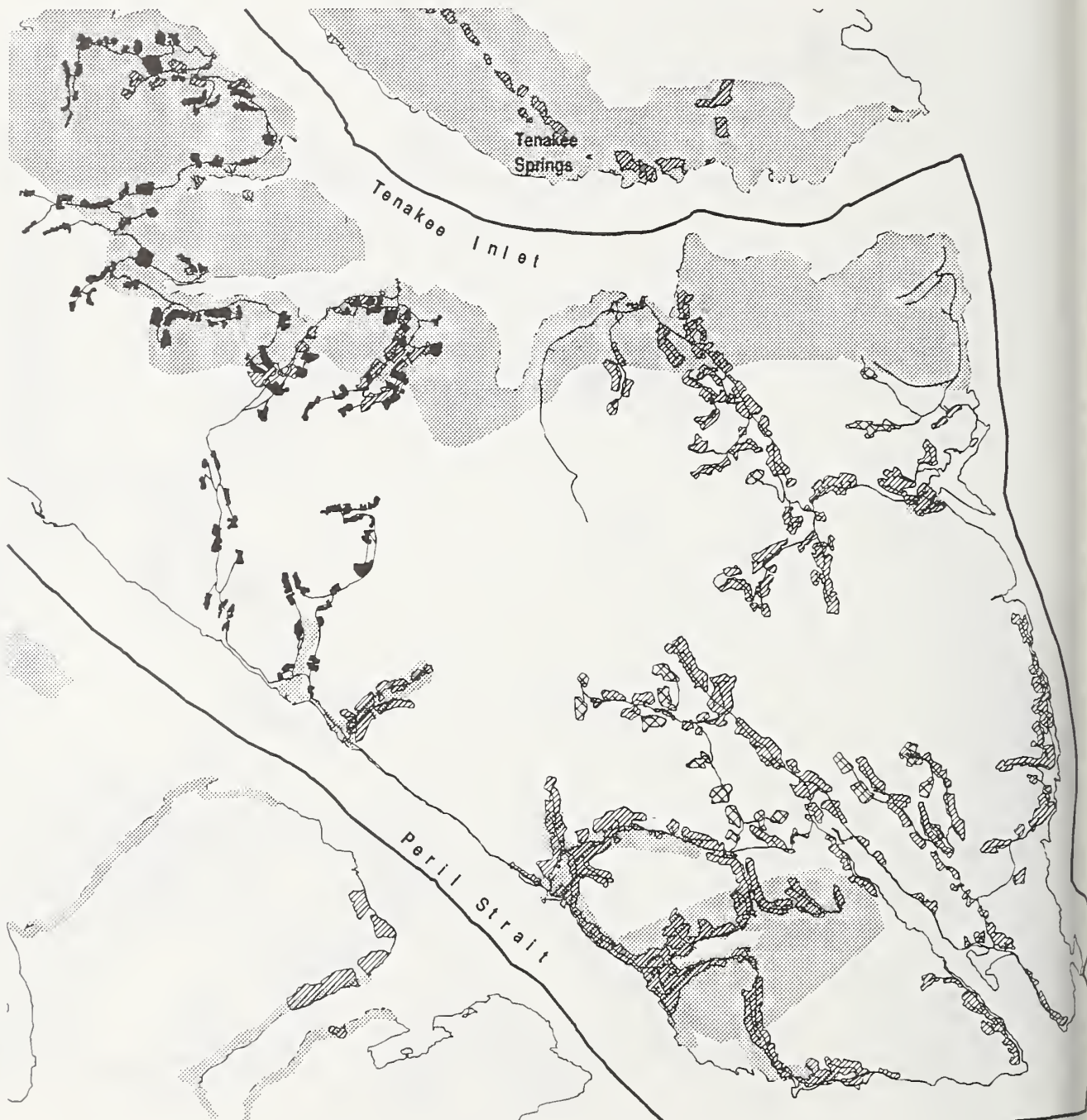
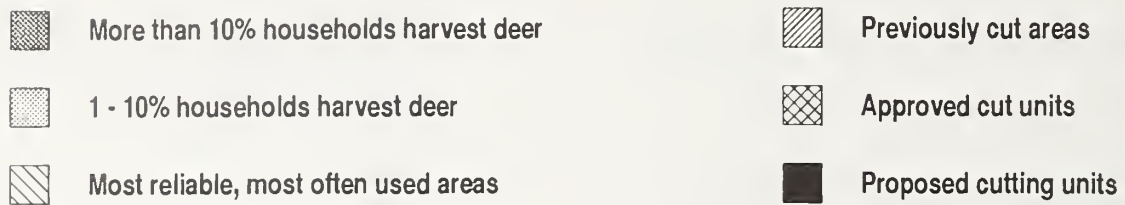
- | | | | |
|---|---------------------------------------|---|------------------------|
|  | More than 10% households harvest deer |  | Previously cut areas |
|  | 1 - 10% households harvest deer |  | Approved cut units |
|  | Most reliable, most often used areas |  | Proposed cutting units |



Figure E-6
Southeast Chichagof Alternative B Haines Subsistence Analysis



Mapscale 1:250000

Figure E-7

Southeast Chichagof Alternative C Haines Subsistence Analysis

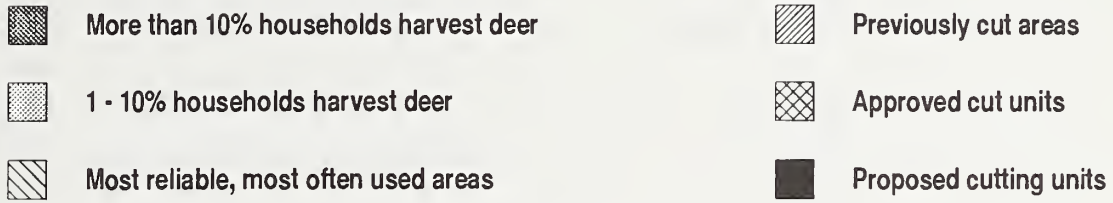
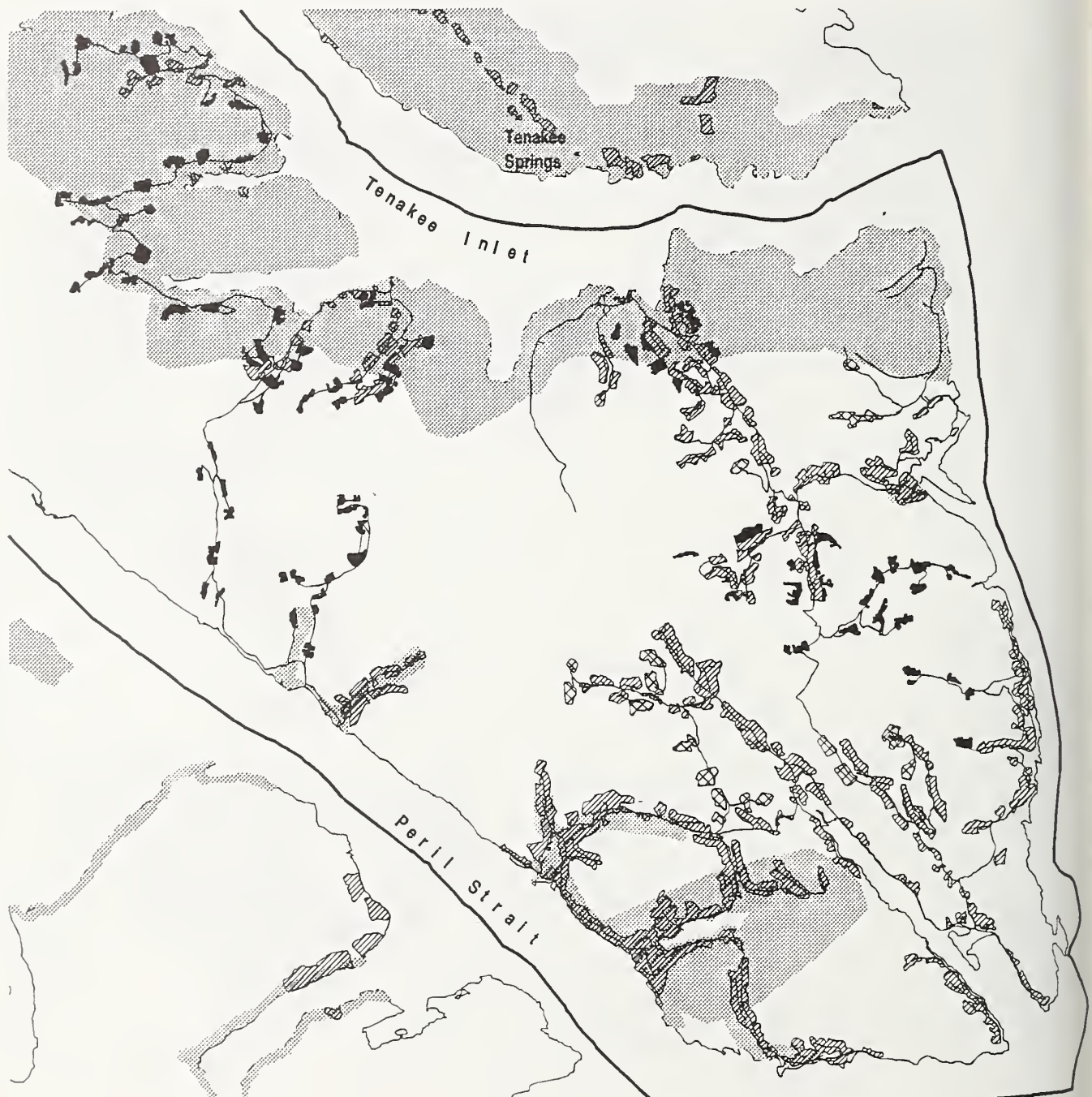
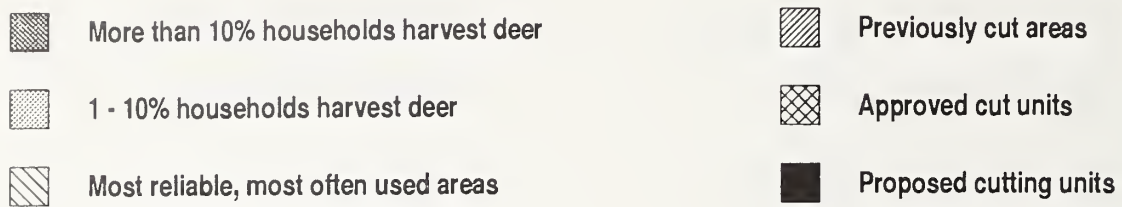


Figure E-8

Southeast Chichagof Alternative D Haines Subsistence Analysis



Mapscale 1:250000

Figure E-9
Southeast Chichagof Alternative E Haines Subsistence Analysis







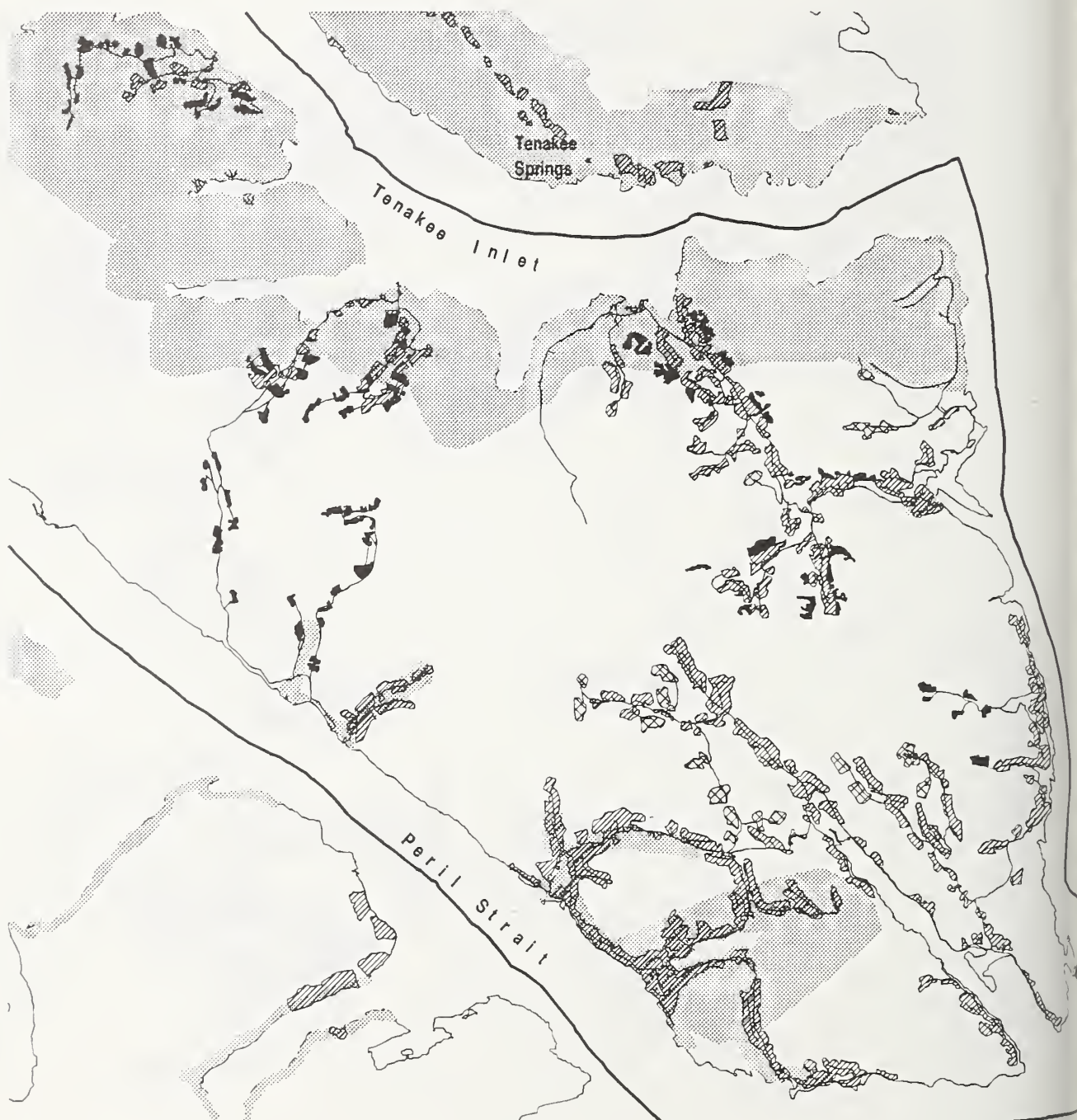
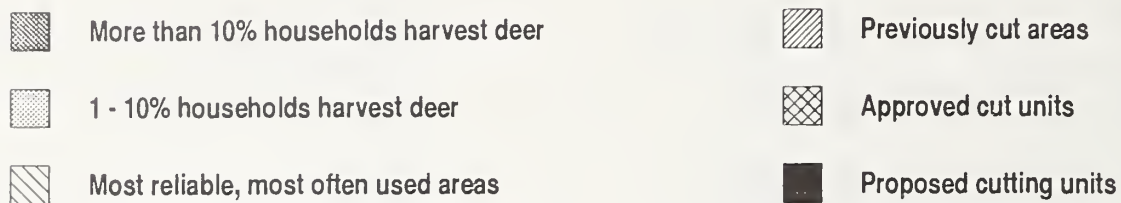
- | | | | |
|--|---------------------------------------|---|------------------------|
|  | More than 10% households harvest deer |  | Previously cut areas |
|  | 1 - 10% households harvest deer |  | Approved cut units |
|  | Most reliable, most often used areas |  | Proposed cutting units |



Figure E-10

Southeast Chichagof Alternative F Haines Subsistence Analysis



Mapscale 1:250000

Figure E-11

Southeast Chichagof Alternative B Hoonah Subsistence Analysis













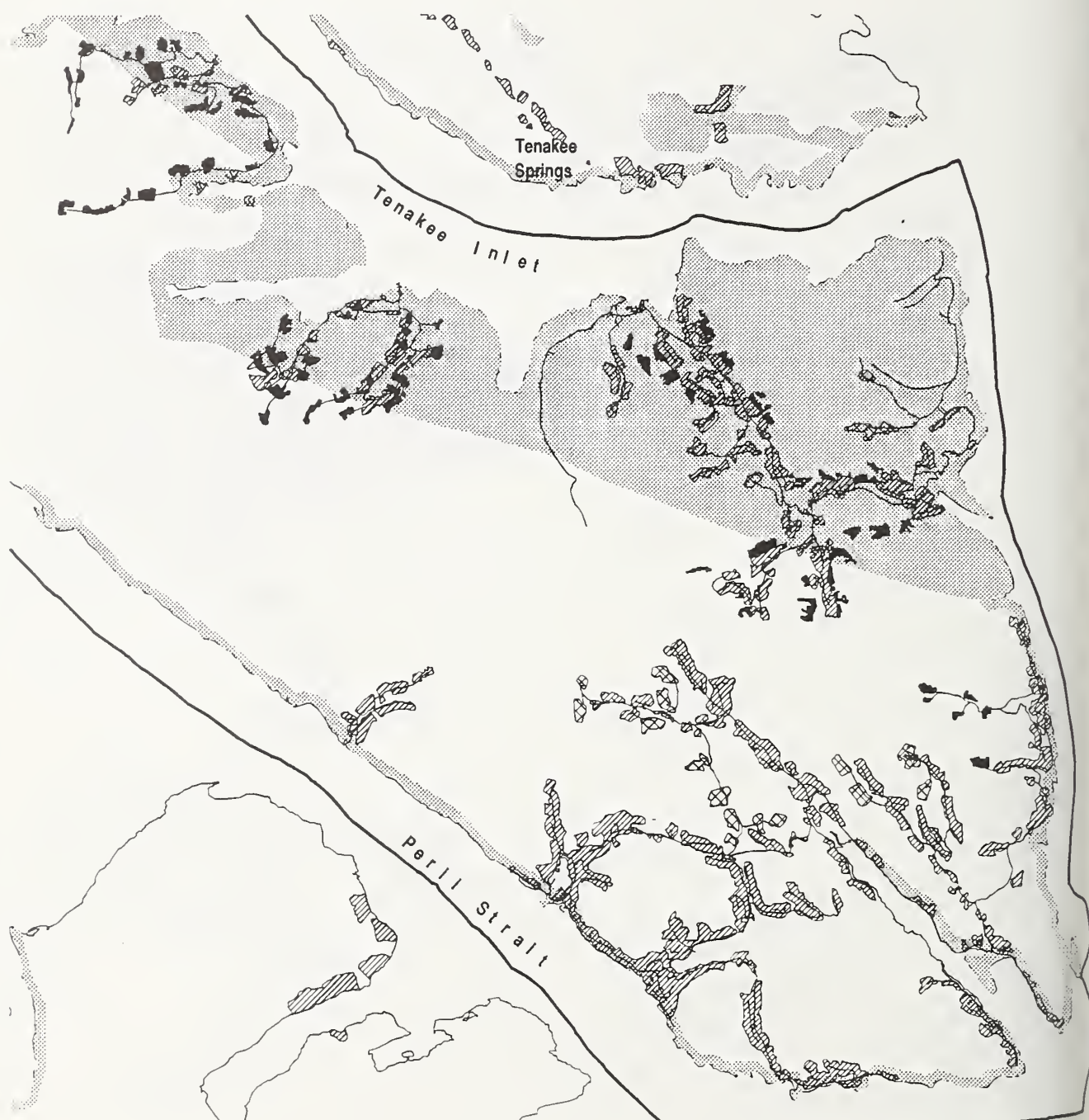
- | | | | |
|--|---------------------------------------|---|------------------------|
|  | More than 10% households harvest deer |  | Previously cut areas |
|  | 1 - 10% households harvest deer |  | Approved cut units |
|  | Most reliable, most often used areas |  | Proposed cutting units |



Figure E-12

Southeast Chichagof Alternative C Hoonah Subsistence Analysis

- | | | | |
|---|---------------------------------------|--|------------------------|
|  | More than 10% households harvest deer |  | Previously cut areas |
|  | 1 - 10% households harvest deer |  | Approved cut units |
|  | Most reliable, most often used areas |  | Proposed cutting units |



Mapscale 1:250000

Figure E-13

Southeast Chichagof Alternative D Hoonah Subsistence Analysis

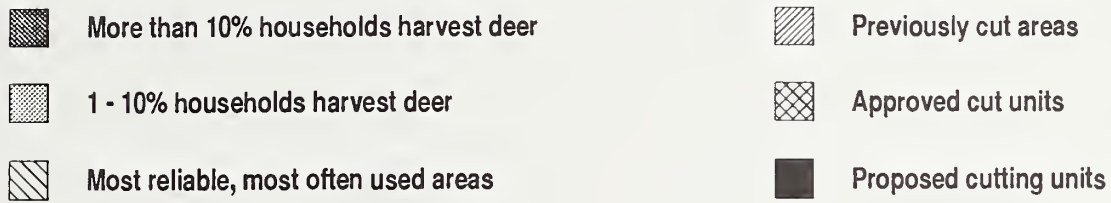
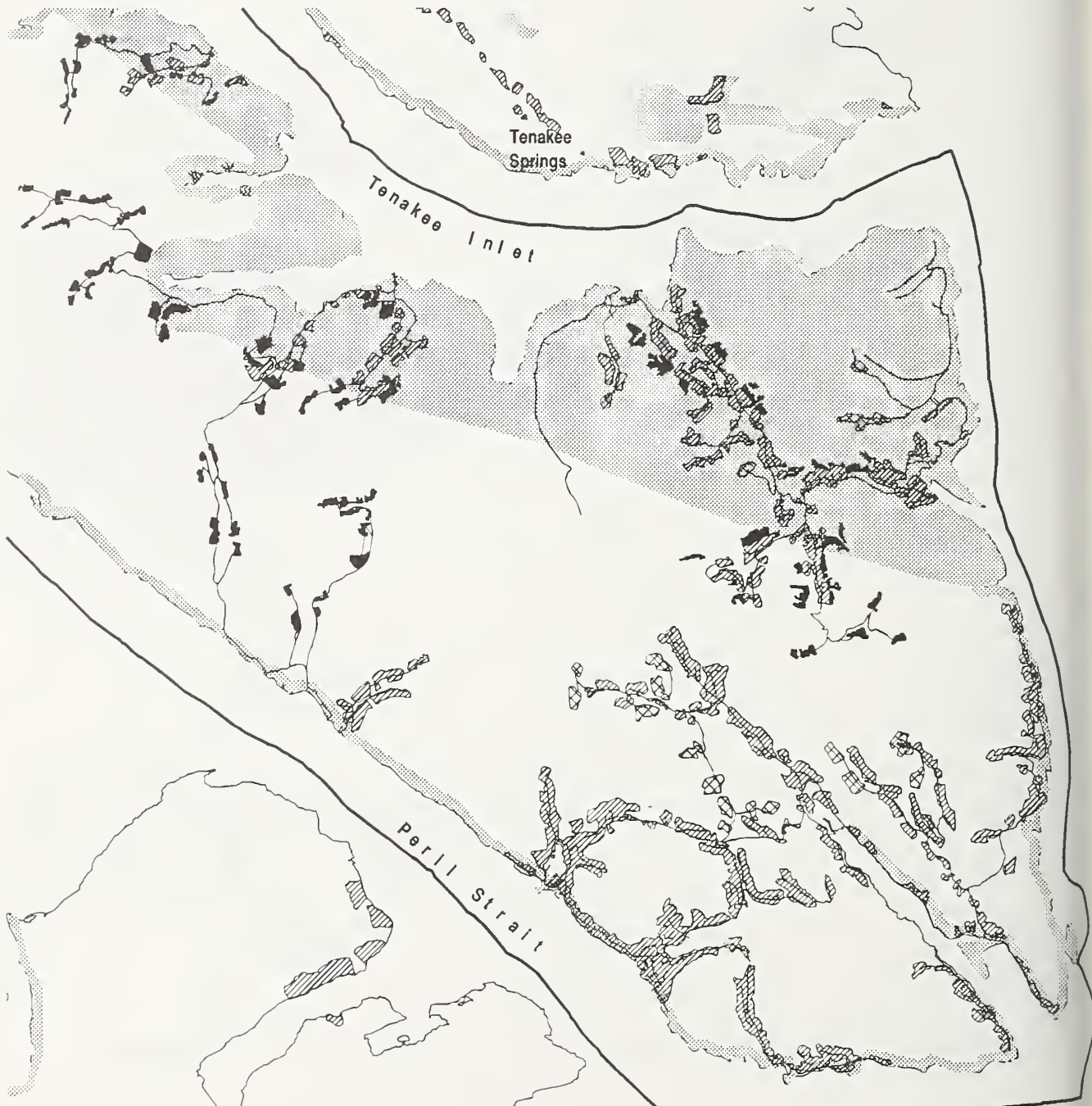
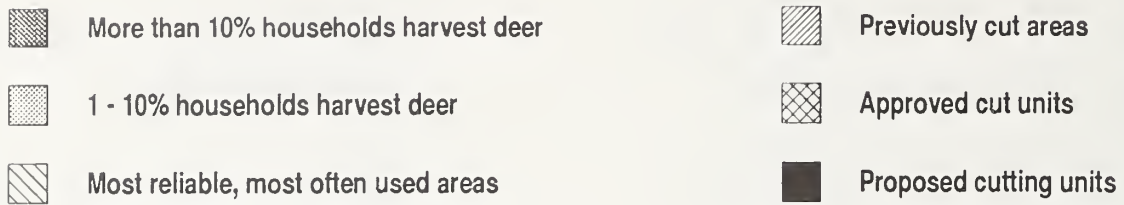


Figure E-14

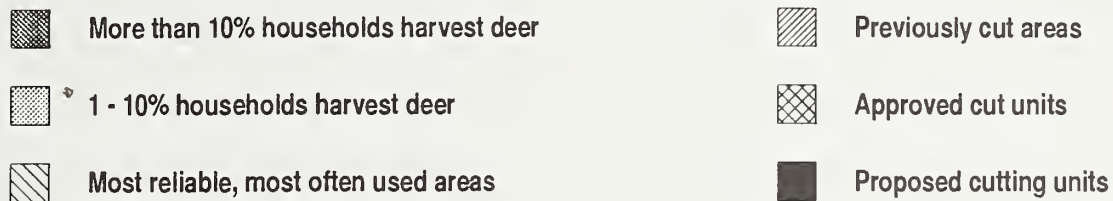
Southeast Chichagof Alternative E Hoonah Subsistence Analysis



Mapscale 1:250000

Figure E-15

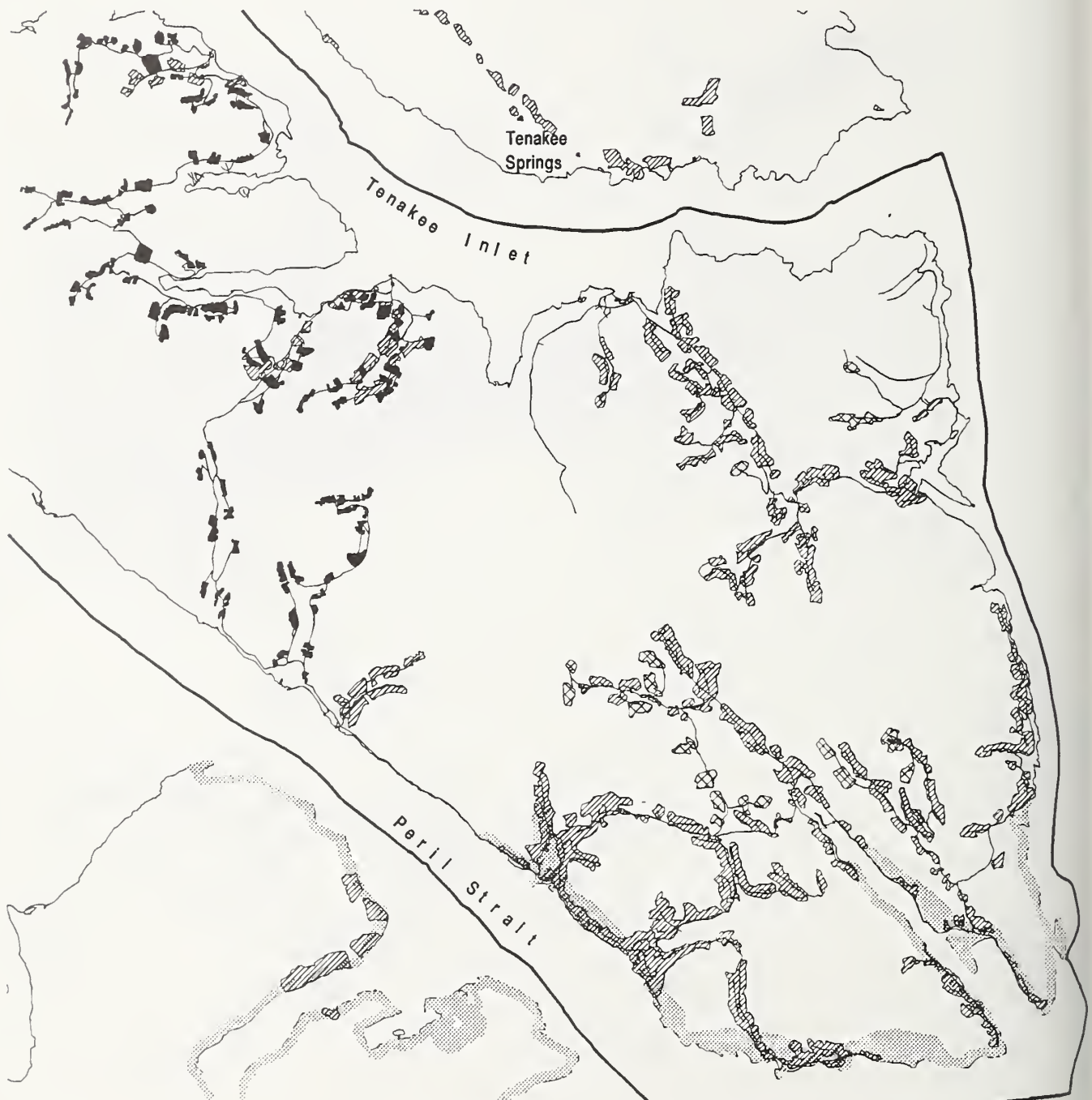
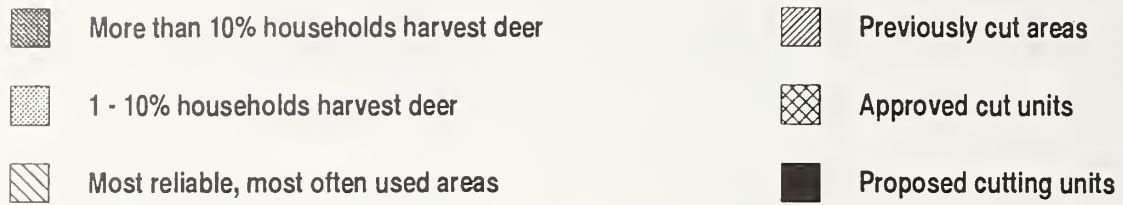
Southeast Chichagof Alternative F Hoonah Subsistence Analysis



Mapscale 1:250000

Figure E-10

Southeast Chichagof Alternative B Kake Subsistence Analysis



Mapscale 1:250000

Figure E-17

Southeast Chichagof Alternative C Kake Subsistence Analysis

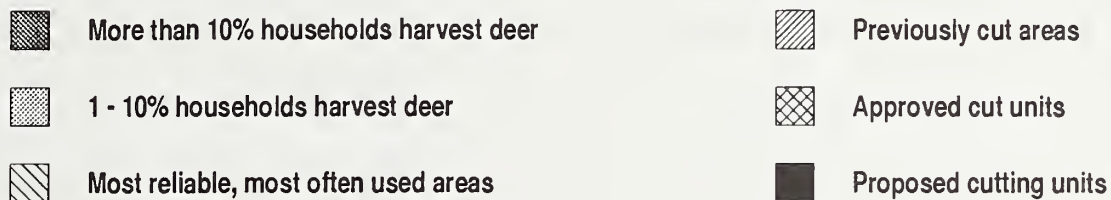
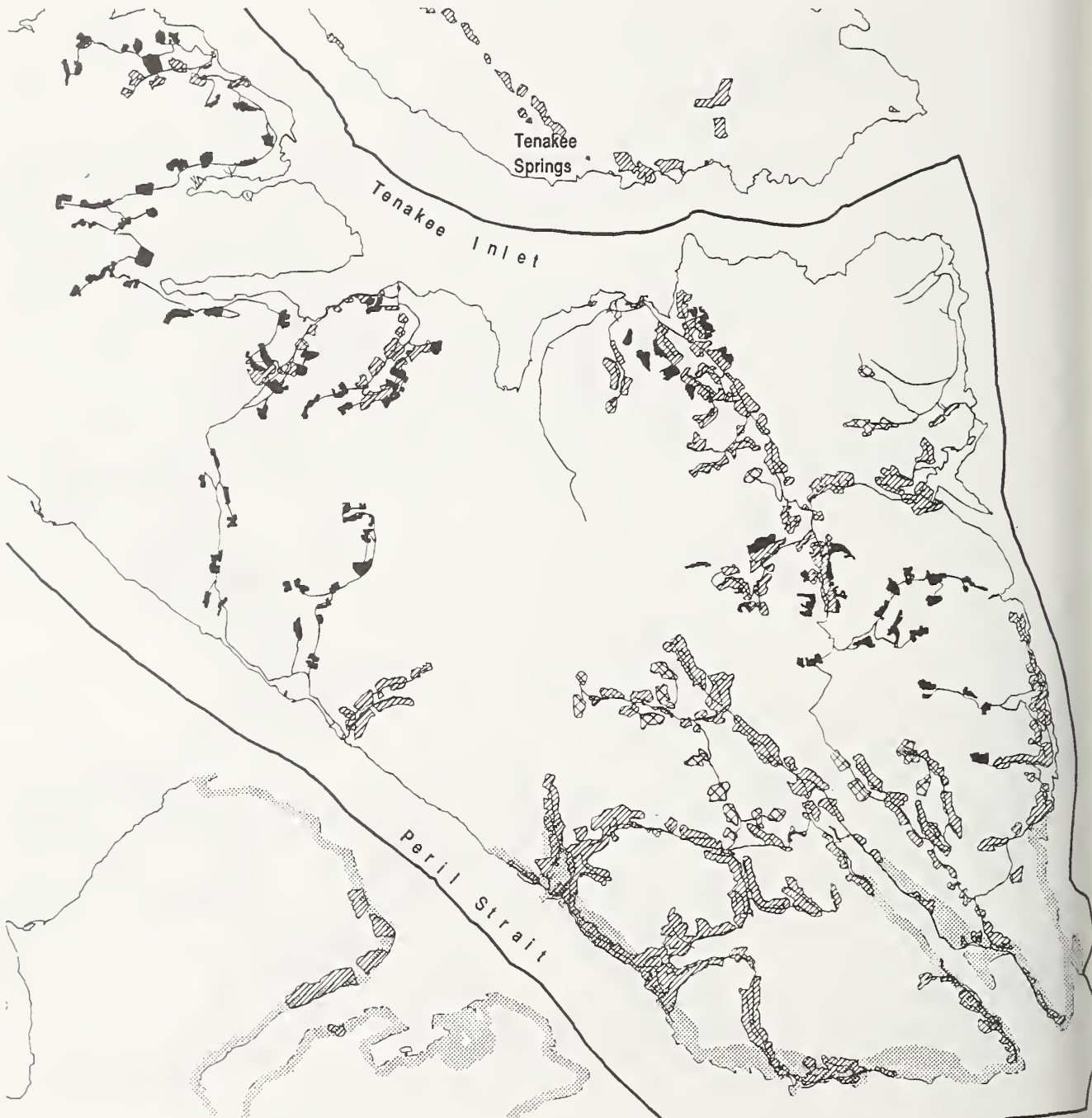
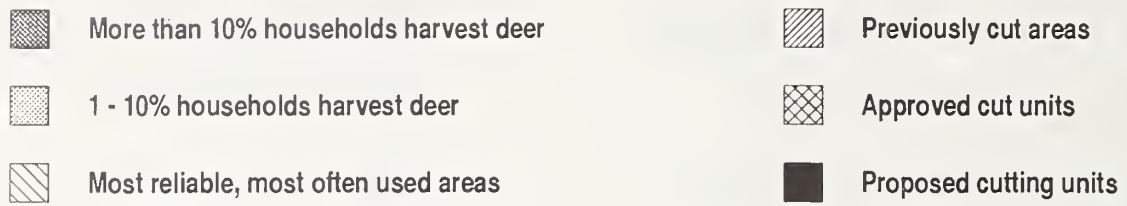








Figure 2-10
 Southeast Chichagof Alternative D Kake Subsistence Analysis



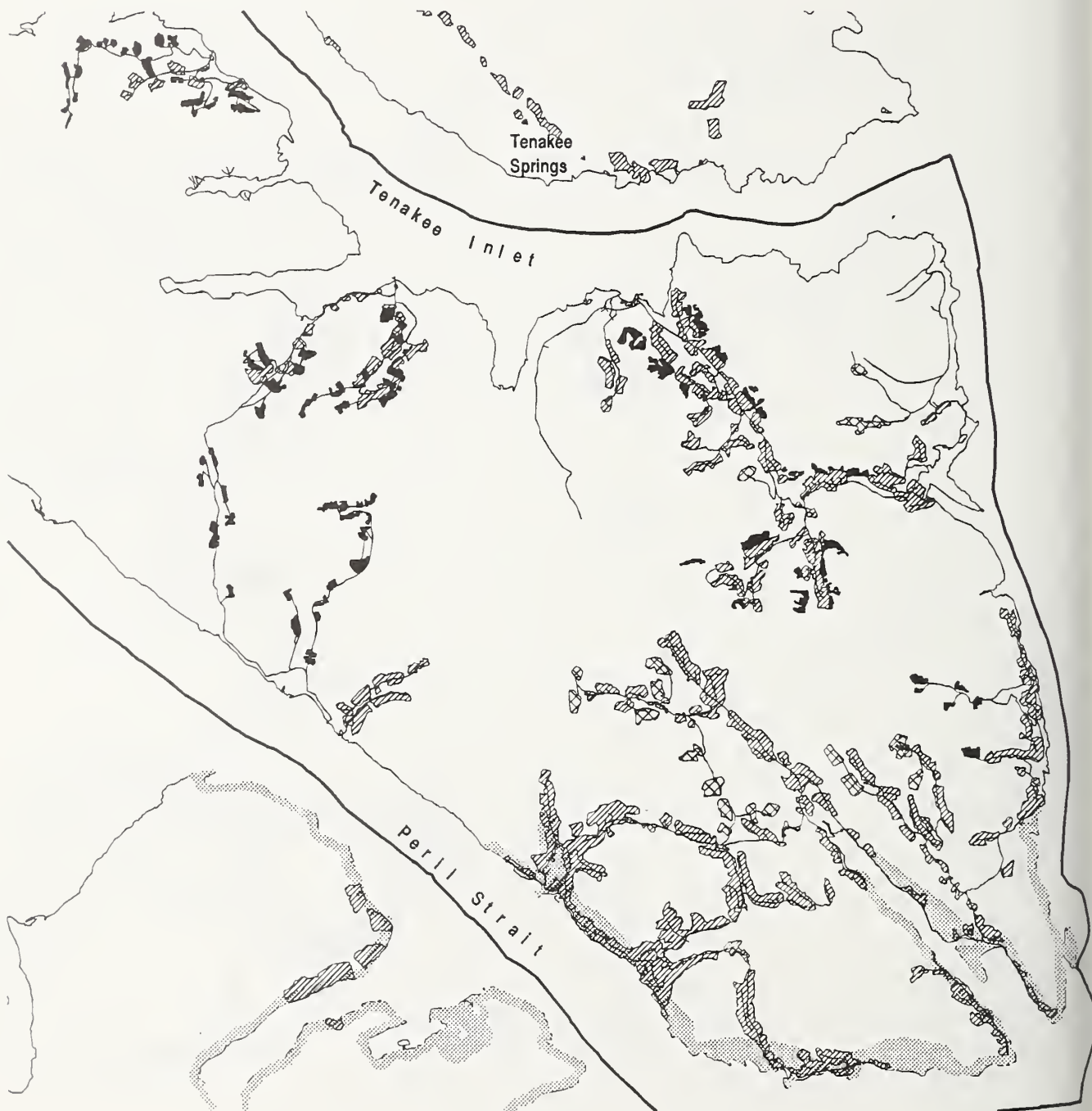
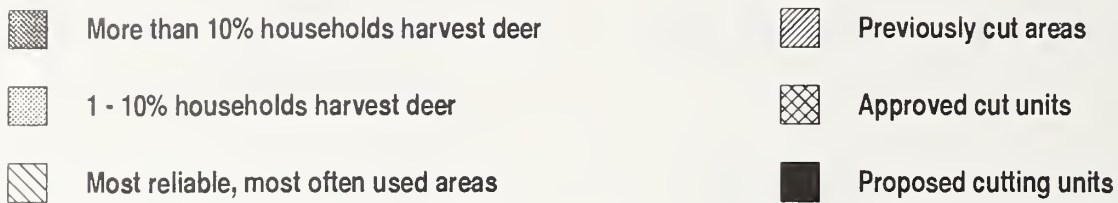
Mapscale 1:250000

Southeast Chichagof Alternative E Kake Subsistence Analysis

- | | | | |
|---|---------------------------------------|---|------------------------|
|  | More than 10% households harvest deer |  | Previously cut areas |
|  | 1 - 10% households harvest deer |  | Approved cut units |
|  | Most reliable, most often used areas |  | Proposed cutting units |



Southeast Chichagof Alternative F Kake Subsistence Analysis



Mapscale 1:250000

Figure E-21

Southeast Chichagof Alternative B Meyers Chuck Subsistence Analysis

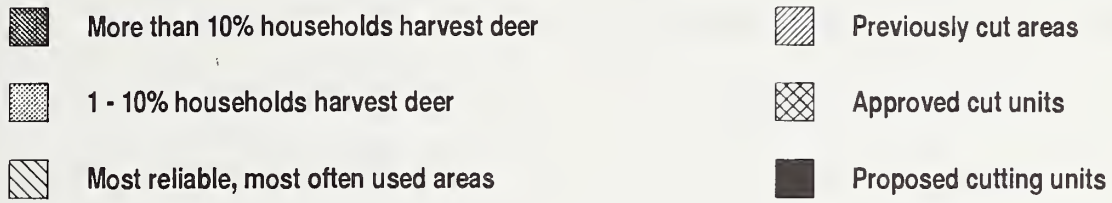
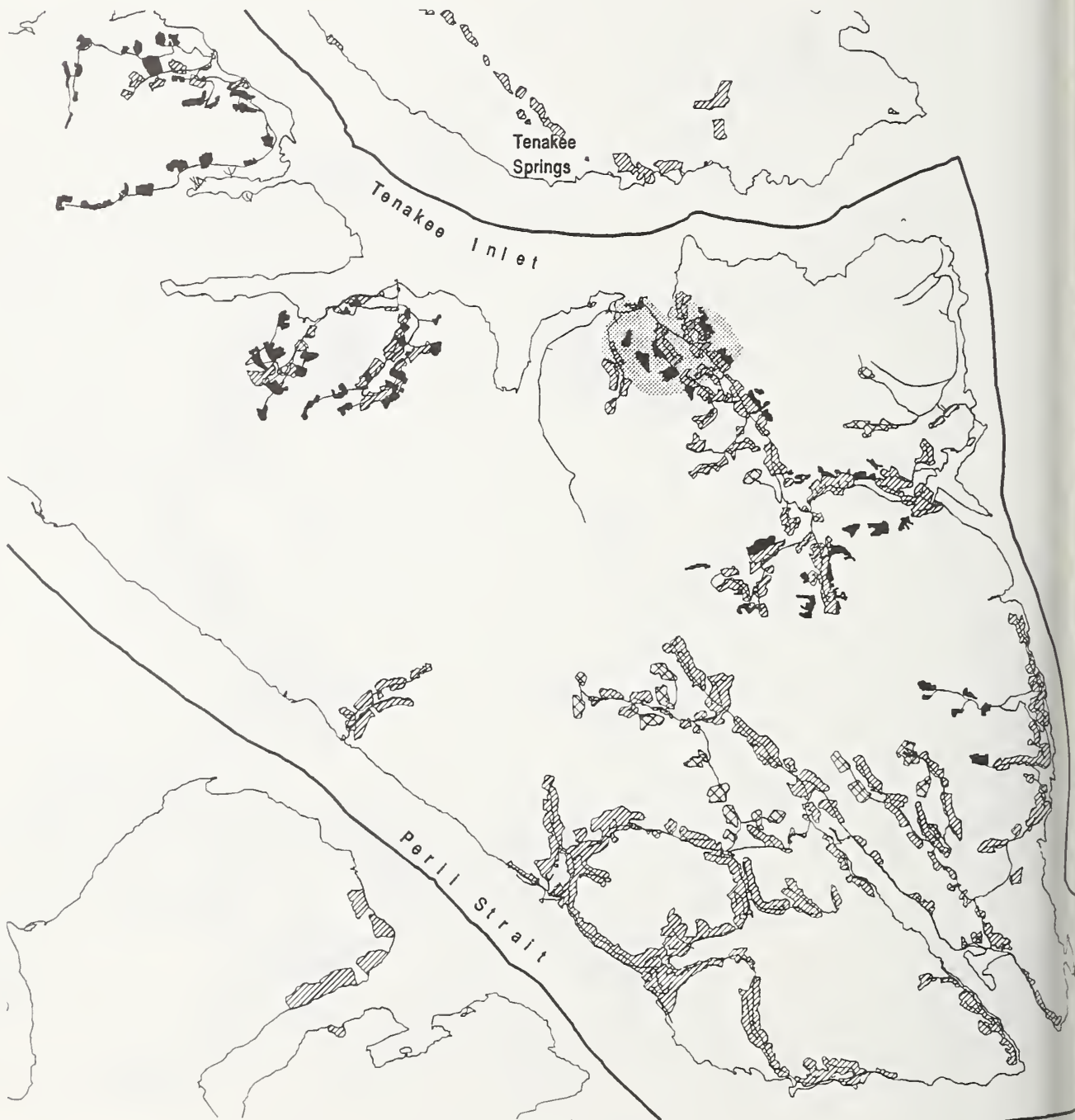
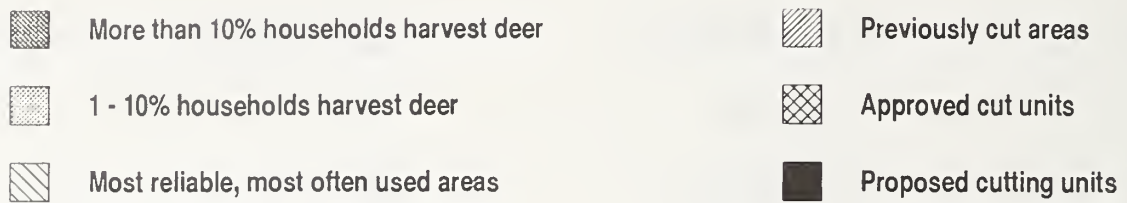


Figure E-22

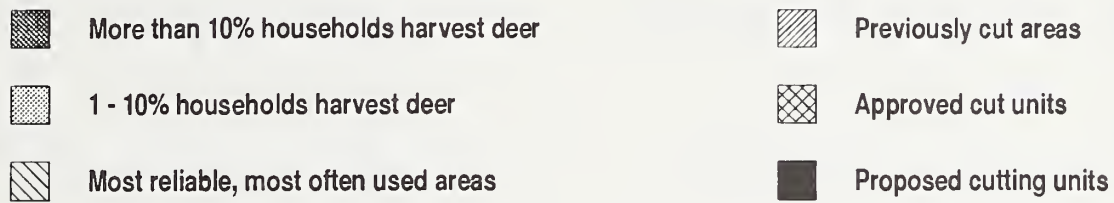
Southeast Chichagof Alternative C Meyers Chuck Subsistence Analysis



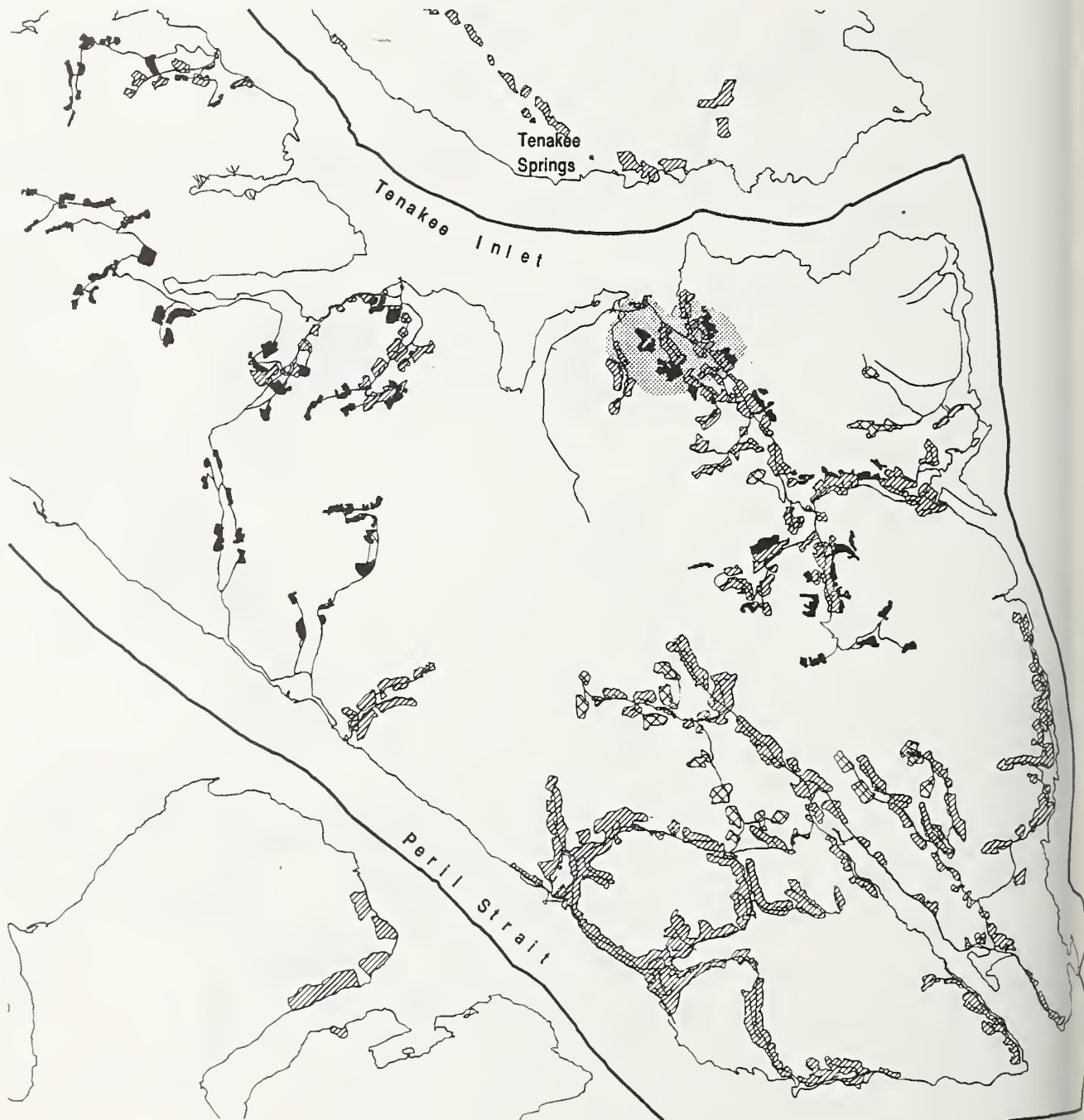
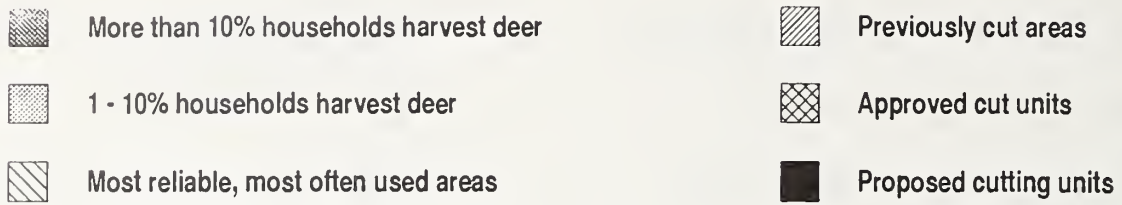
Mapscale 1:250000

Figure E-23

Southeast Chichagof Alternative D Meyers Chuck Subsistence Analysis



Southeast Chichagof Alternative E Meyers Chuck Subsistence Analysis



Mapscale 1:250000

Figure E-25

Southeast Chichagof Alternative F Meyers Chuck Subsistence Analysis

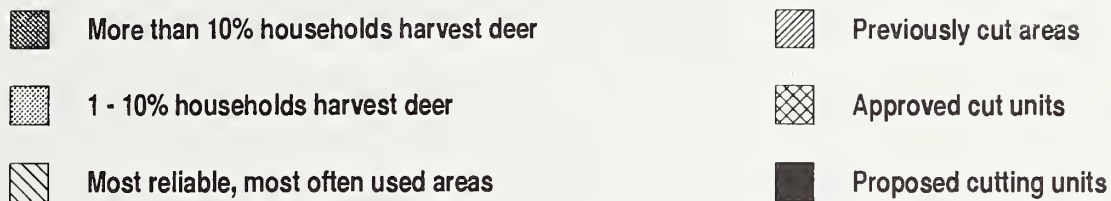
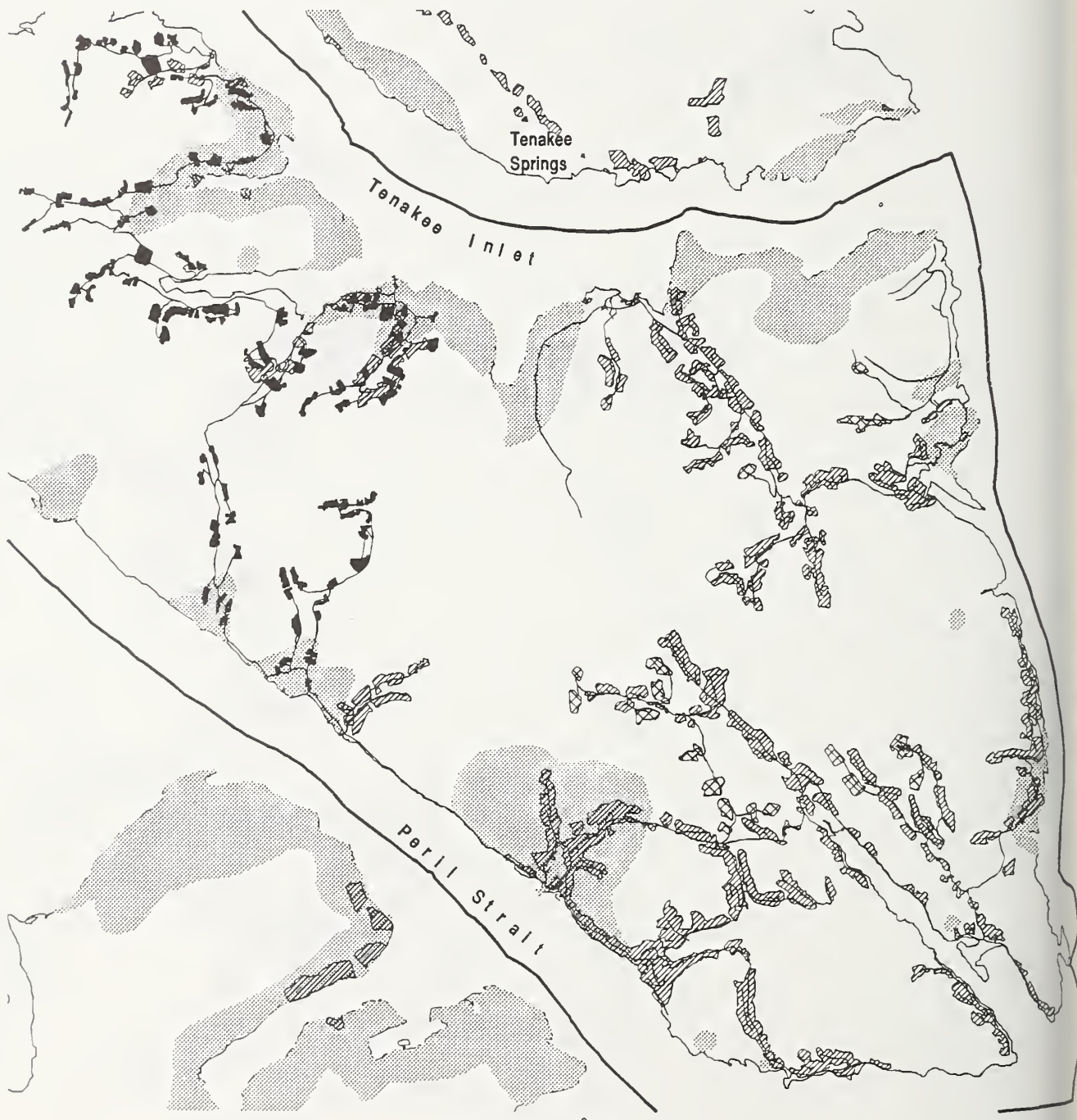
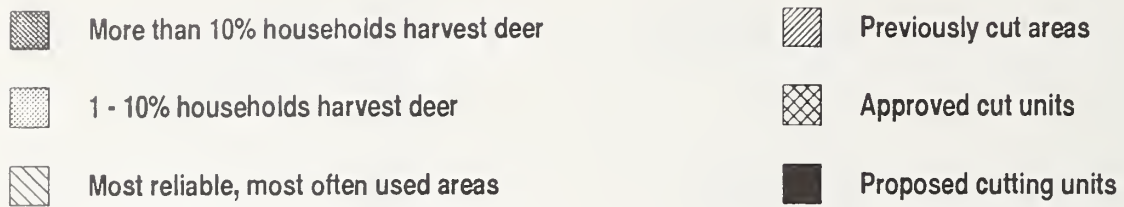


Figure E-26

Southeast Chichagof Alternative B Petersburg Subsistence Analysis



Mapscale 1:250000

Figure E-27

Southeast Chichagof Alternative C Petersburg Subsistence Analysis

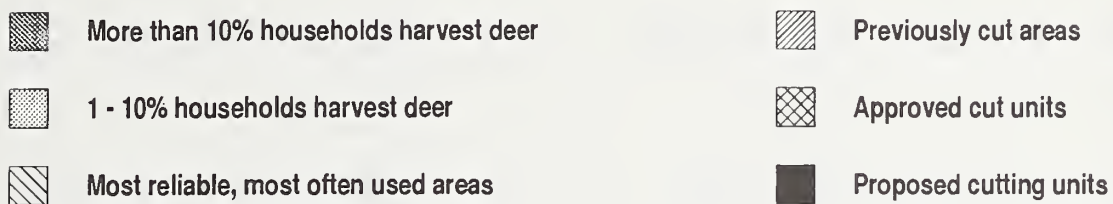
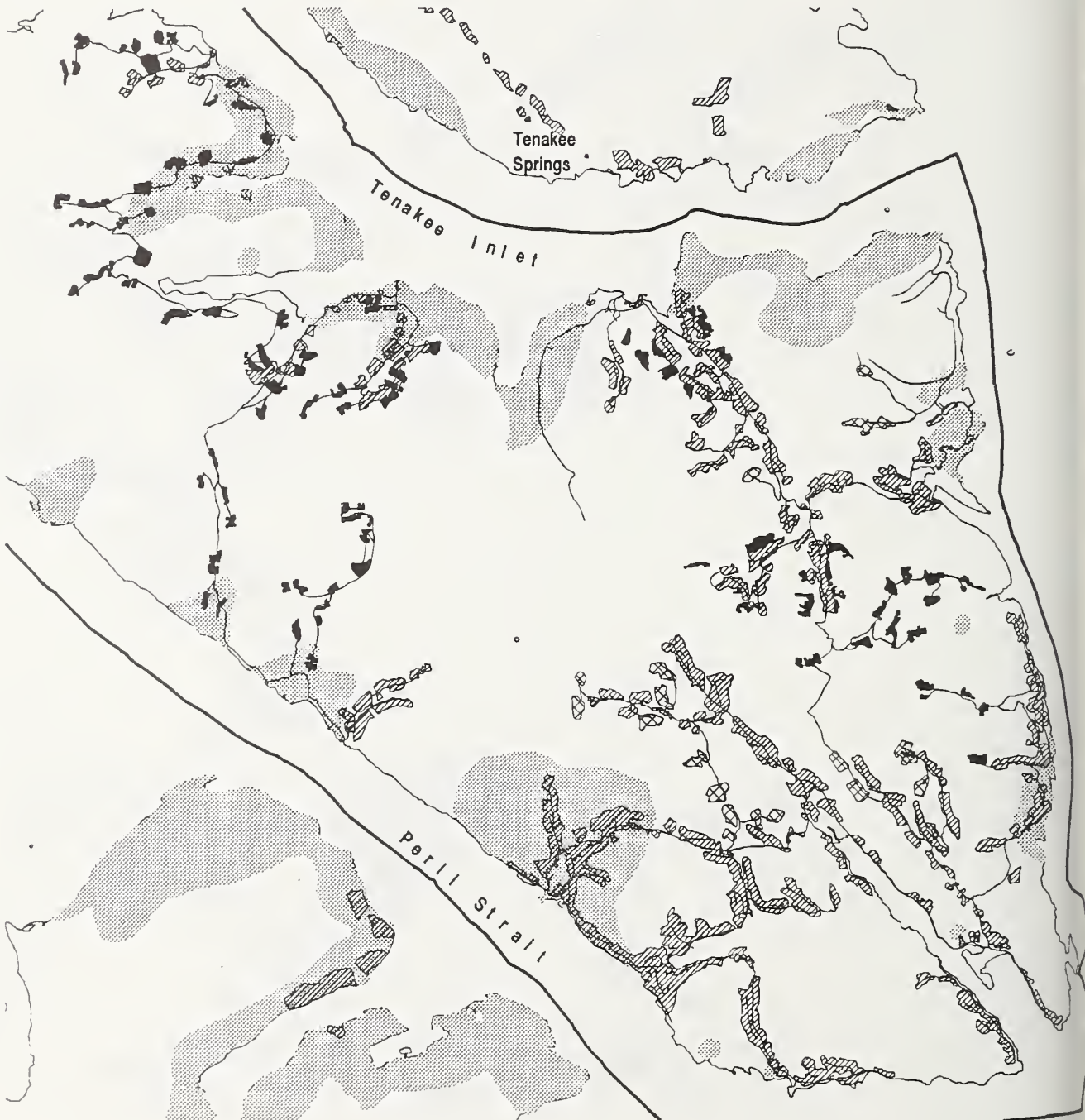
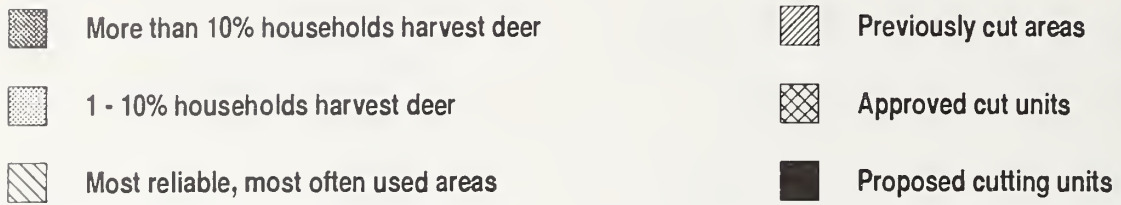


Figure E-28

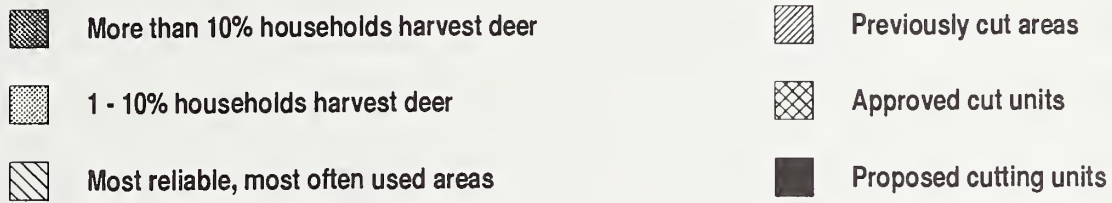
Southeast Chichagof Alternative D Petersburg Subsistence Analysis



Mapscale 1:250000

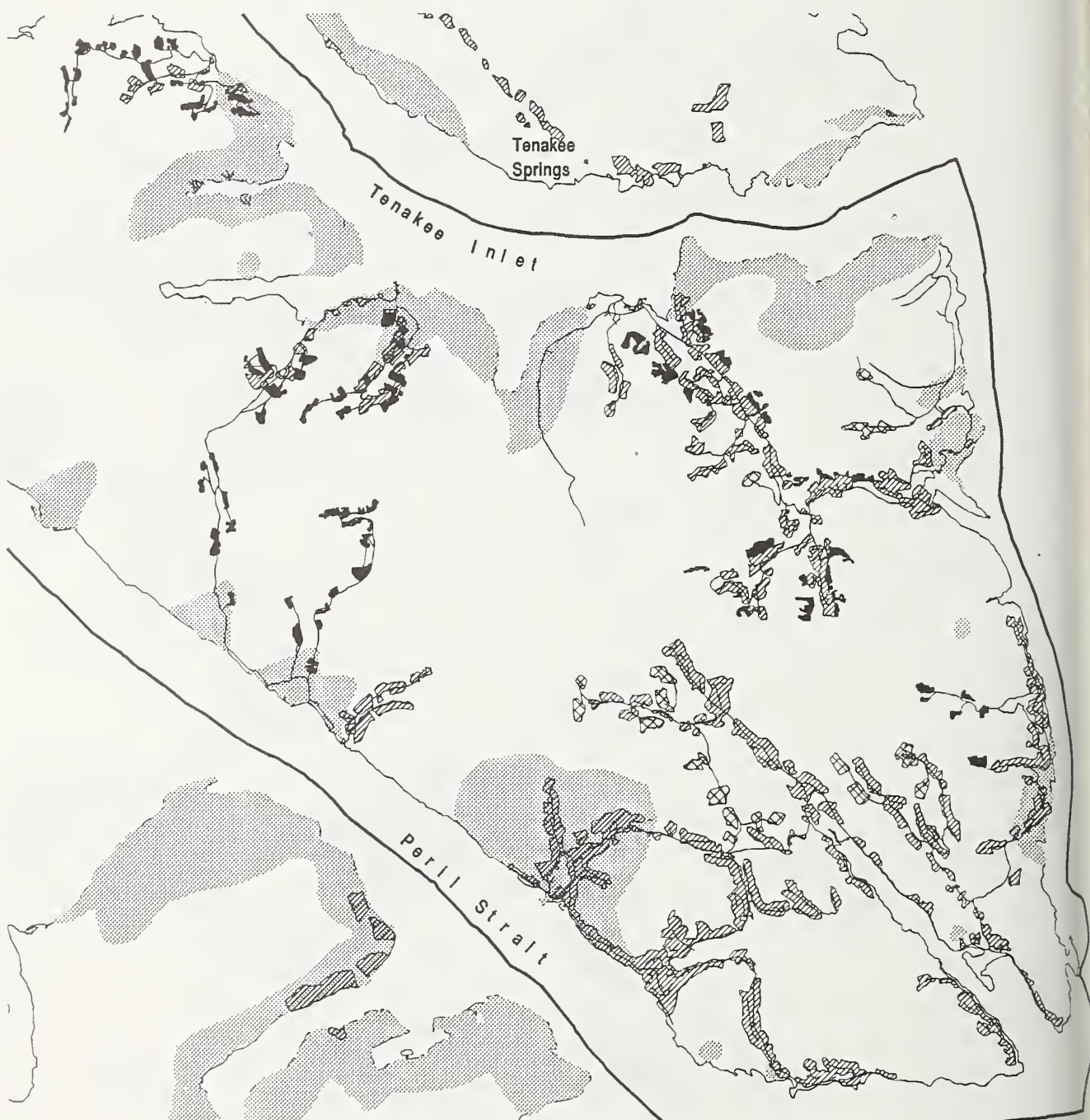
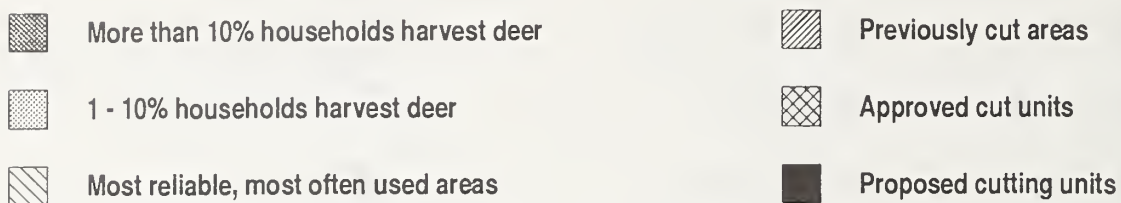
Figure E-29

Southeast Chichagof Alternative E Petersburg Subsistence Analysis



Mapscale 1:250000







Figure E-30
**Southeast Chichagof Alternative F Petersburg Subsistence
 Analysis**



Mapscale 1:250000

Figure E-31

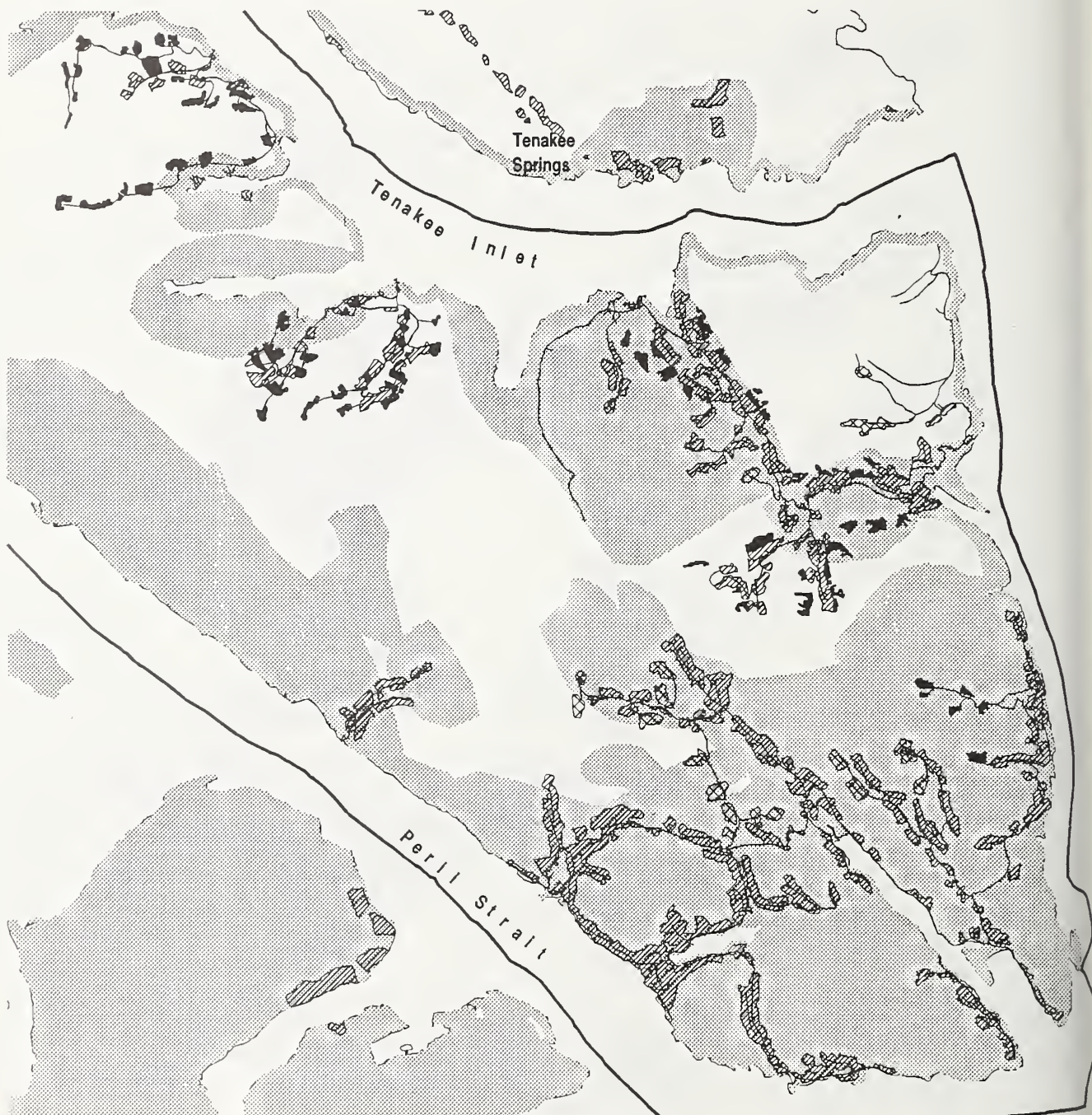
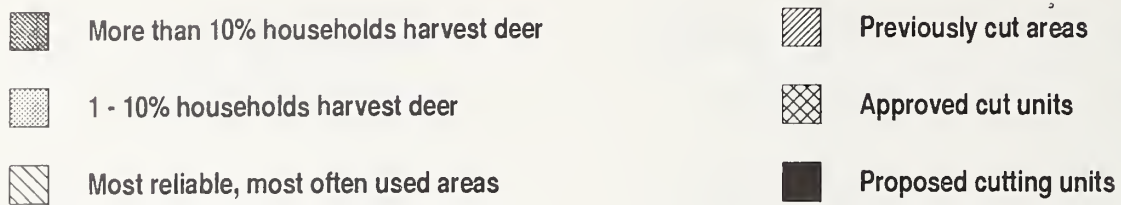
Soutneast Chichagof Alternative B Sitka Subsistence Analysis

- | | | | |
|--|---------------------------------------|---|------------------------|
|  | More than 10% households harvest deer |  | Previously cut areas |
|  | 1 - 10% households harvest deer |  | Approved cut units |
|  | Most reliable, most often used areas |  | Proposed cutting units |



Mapscale 1:250000

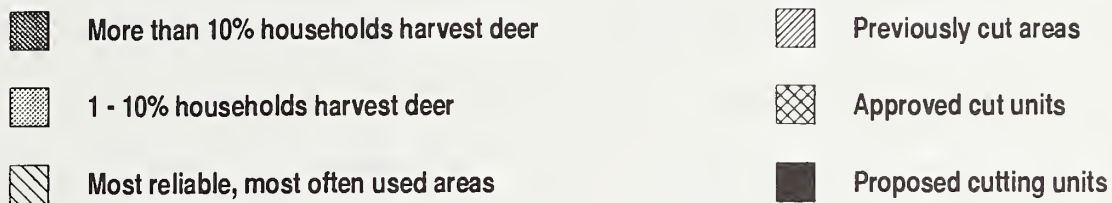
Southeast Chichagof Alternative C Sitka Subsistence Analysis



Mapscale 1:250000

Figure E-33

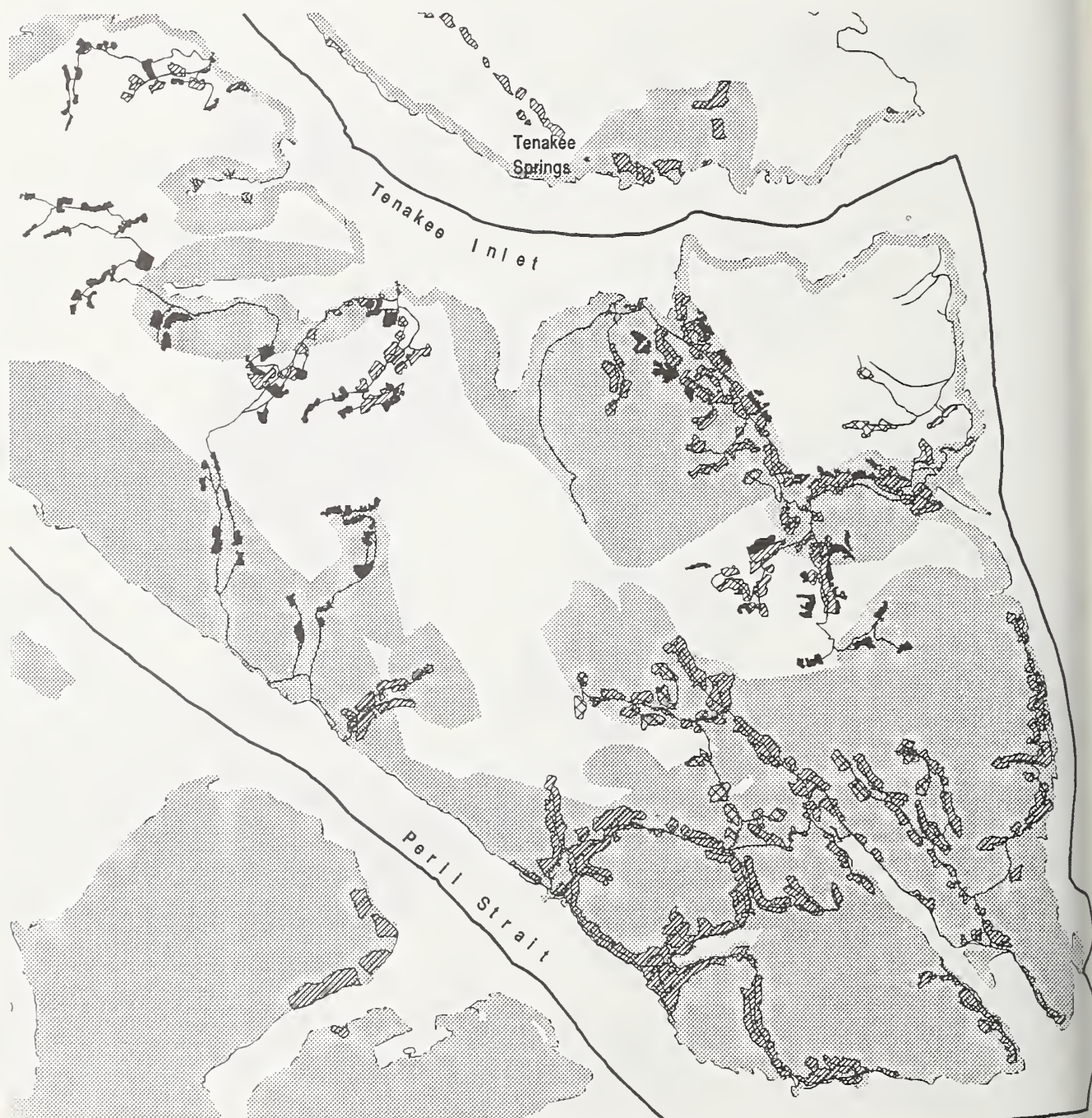
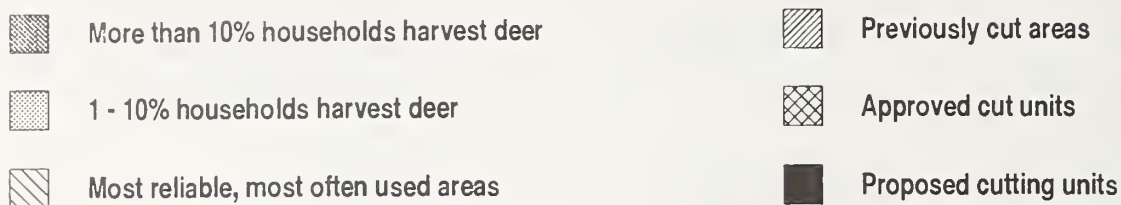
Southeast Chichagof Alternative D Sitka Subsistence Analysis



Mapscale 1:250000

Figure E-34







Southeast Chichagof Alternative E Sitka Subsistence Analysis



Mapscale 1:250000

Figure E-35

Southeast Chichagof Alternative F Sitka Subsistence Analysis

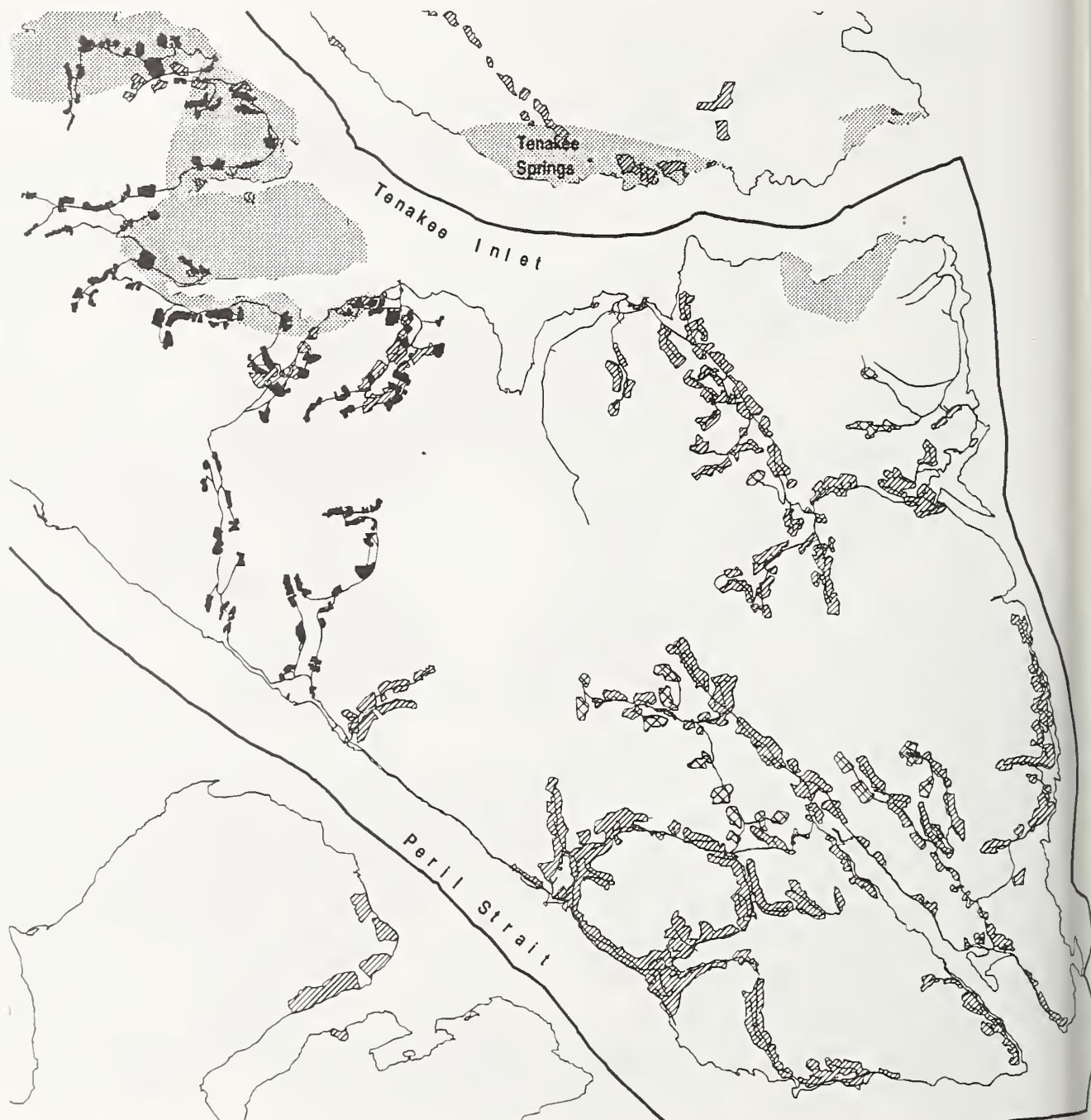
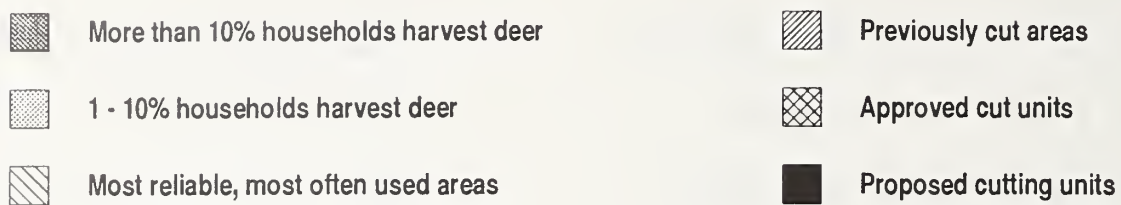
- | | | | |
|--|---------------------------------------|---|------------------------|
|  | More than 10% households harvest deer |  | Previously cut areas |
|  | 1 - 10% households harvest deer |  | Approved cut units |
|  | Most reliable, most often used areas |  | Proposed cutting units |



Mapscale 1:250000

Figure E-36

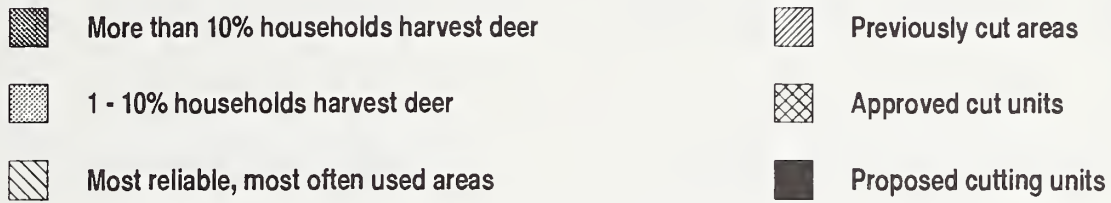
Southeast Chichagof Alternative B Skagway Subsistence Analysis



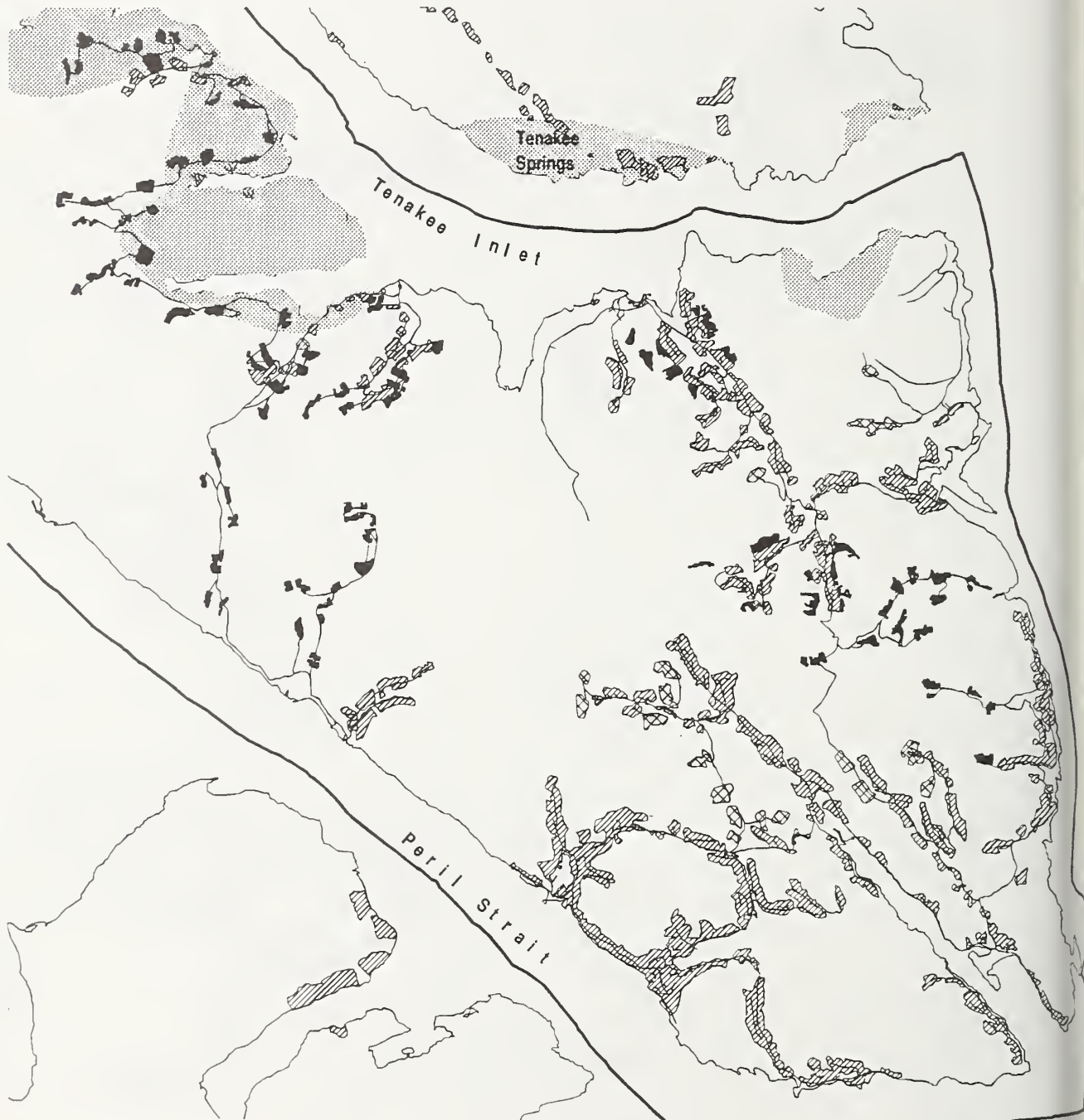
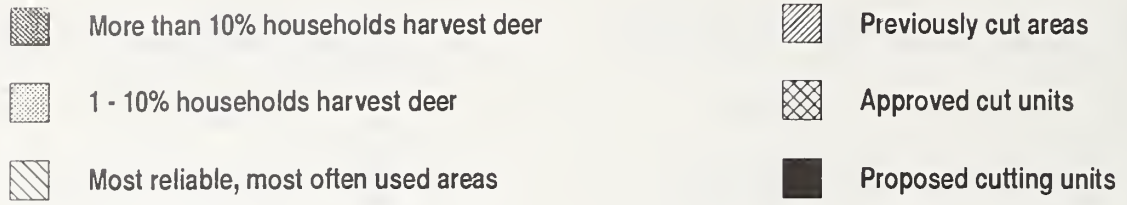
Mapscale 1:250000

Figure E-37

Southeast Chichagof Alternative C Skagway Subsistence Analysis









Southeast Chichagof Alternative D Skagway Subsistence Analysis



Mapscale 1:250000







Figure E-39

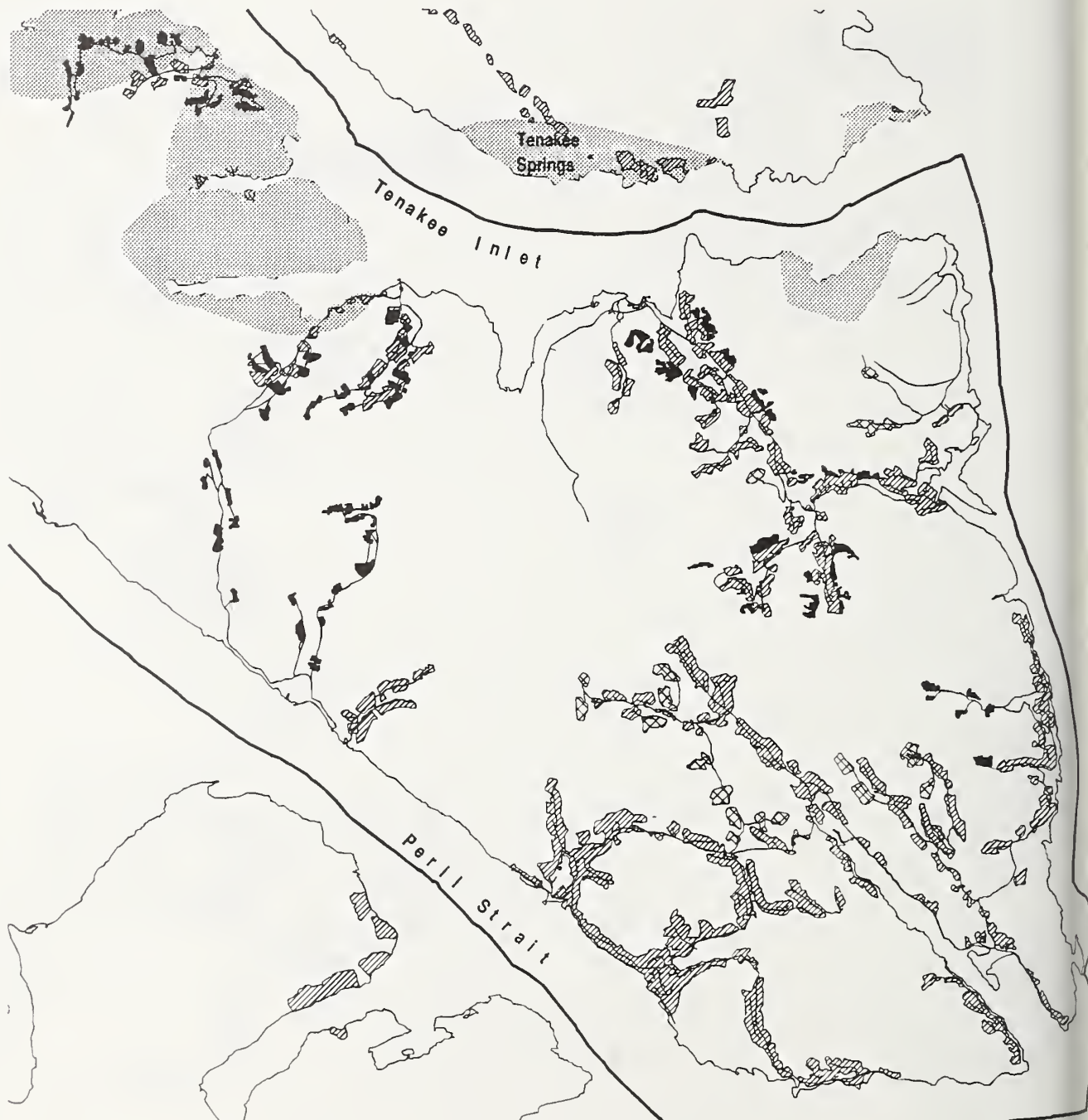
Southeast Chichagof Alternative E Skagway Subsistence Analysis

- | | | | |
|--|---------------------------------------|---|------------------------|
|  | More than 10% households harvest deer |  | Previously cut areas |
|  | 1 - 10% households harvest deer |  | Approved cut units |
|  | Most reliable, most often used areas |  | Proposed cutting units |



Southeast Chichagof Alternative F Skagway Subsistence Analysis







- | | | | |
|---|---------------------------------------|---|------------------------|
|  | More than 10% households harvest deer |  | Previously cut areas |
|  | 1 - 10% households harvest deer |  | Approved cut units |
|  | Most reliable, most often used areas |  | Proposed cutting units |



Mapscale 1:250000

Fig. E-41

Southeast Chichagof Alternative B Wrangell Subsistence Analysis

- | | | | |
|--|---------------------------------------|---|------------------------|
|  | More than 10% households harvest deer |  | Previously cut areas |
|  | 1 - 10% households harvest deer |  | Approved cut units |
|  | Most reliable, most often used areas |  | Proposed cutting units |



Mapscale 1:250000

Southeast Chichagof Alternative C Wrangell Subsistence Analysis

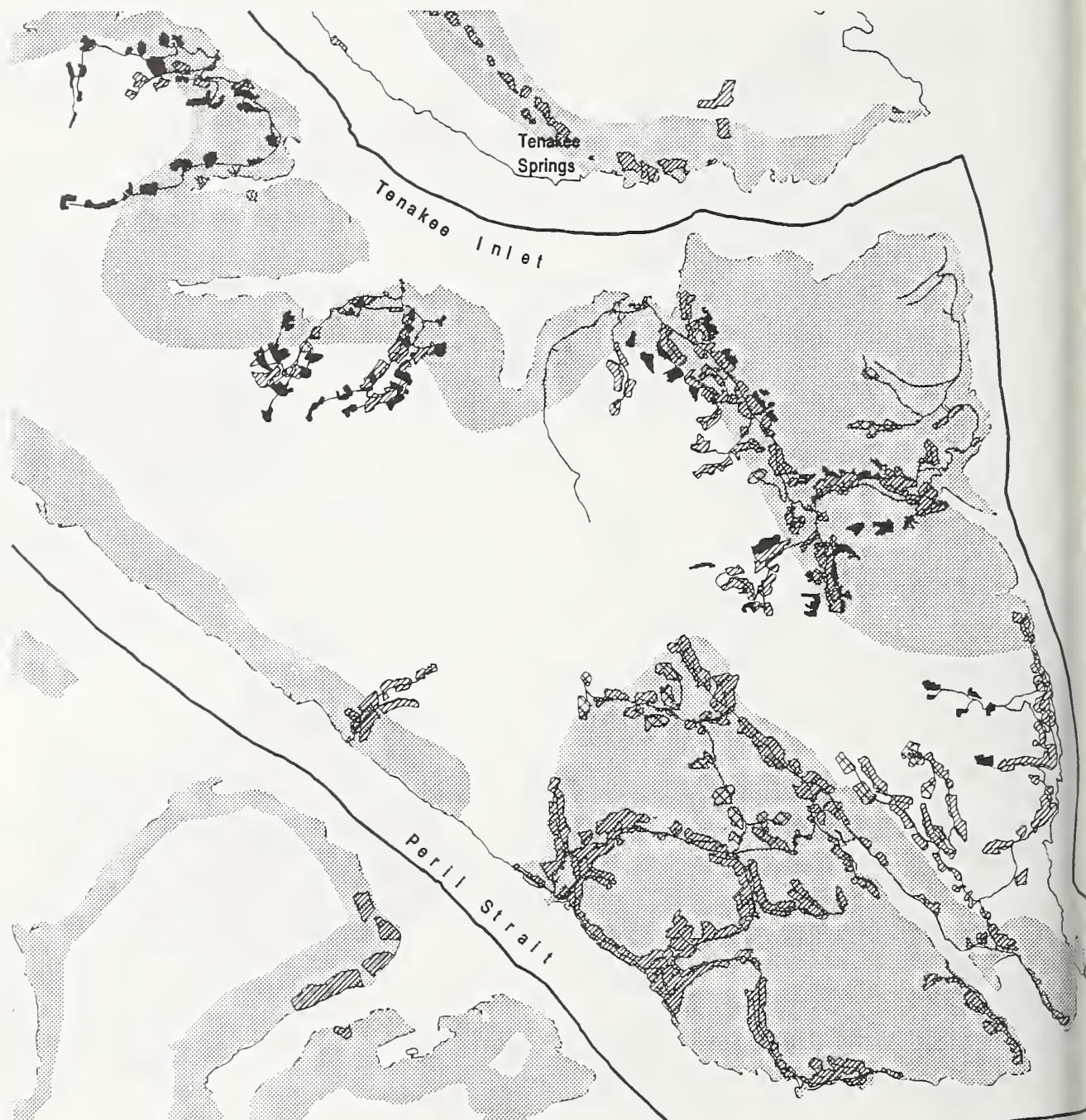
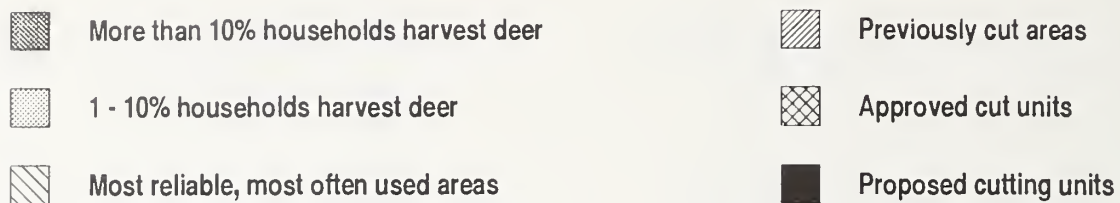


Figure E-43

Southeast Chichagof Alternative D Wrangell Subsistence Analysis







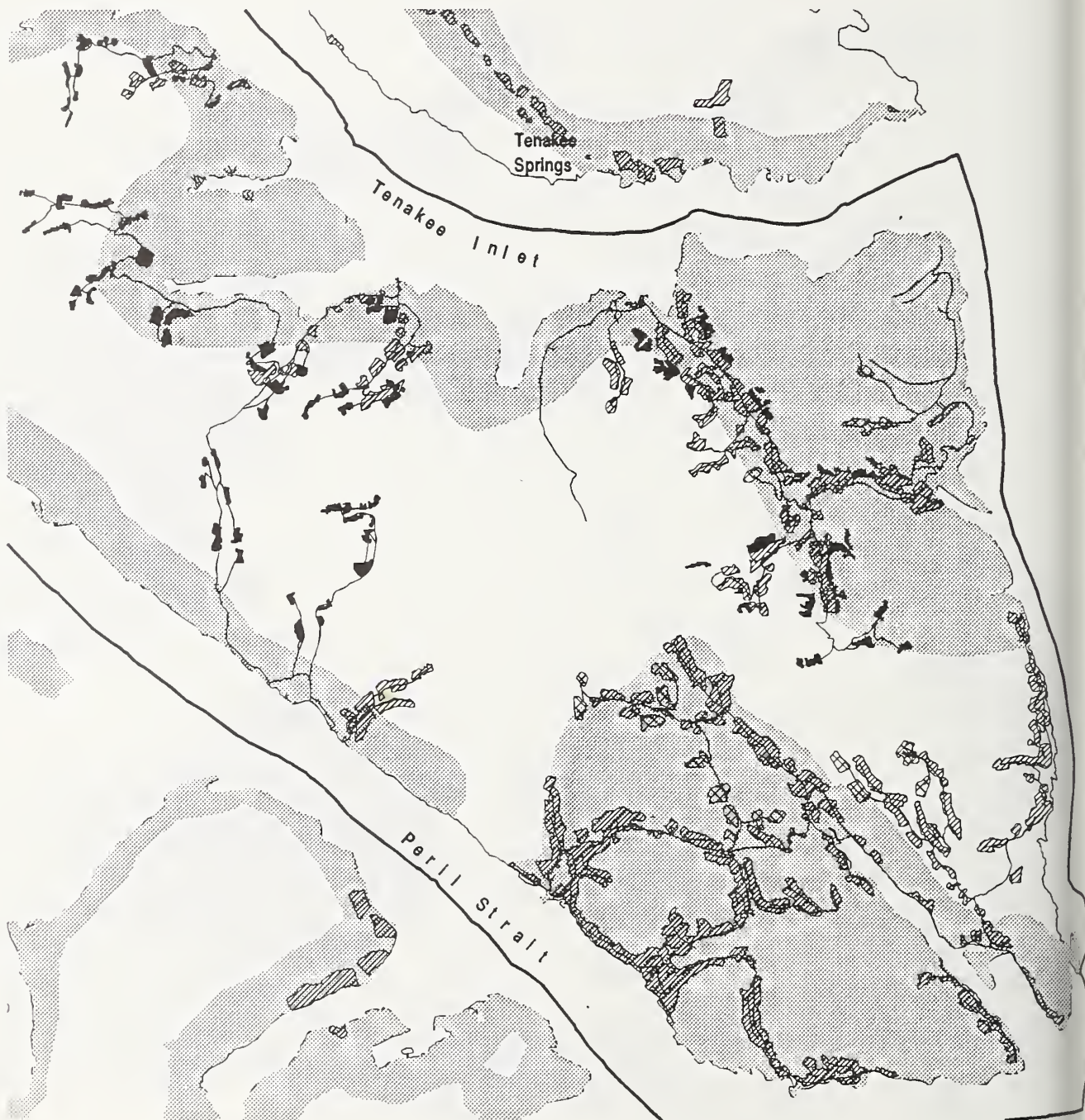
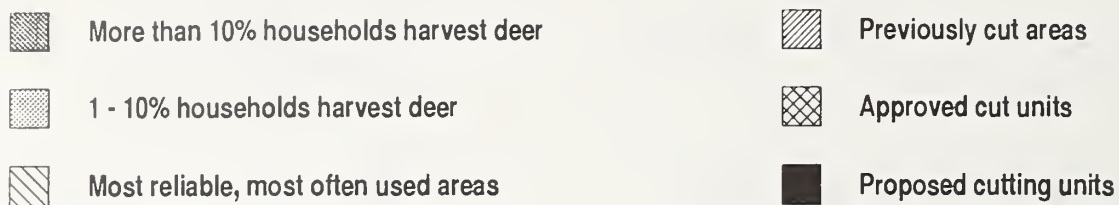
- | | | | |
|--|---------------------------------------|---|------------------------|
|  | More than 10% households harvest deer |  | Previously cut areas |
|  | 1 - 10% households harvest deer |  | Approved cut units |
|  | Most reliable, most often used areas |  | Proposed cutting units |



Figure E-44







Southeast Chichagof Alternative E Wrangell Subsistence Analysis



Mapscale 1:250000

Figure E-45

Southeast Chichagof Alternative F Wrangell Subsistence Analysis

- | | | | |
|---|---------------------------------------|---|------------------------|
|  | More than 10% households harvest deer |  | Previously cut areas |
|  | 1 - 10% households harvest deer |  | Approved cut units |
|  | Most reliable, most often used areas |  | Proposed cutting units |



Mapscale 1:250000

Figure E-46

Subsistence Harvest as a Percentage of the Total Deer Harvest

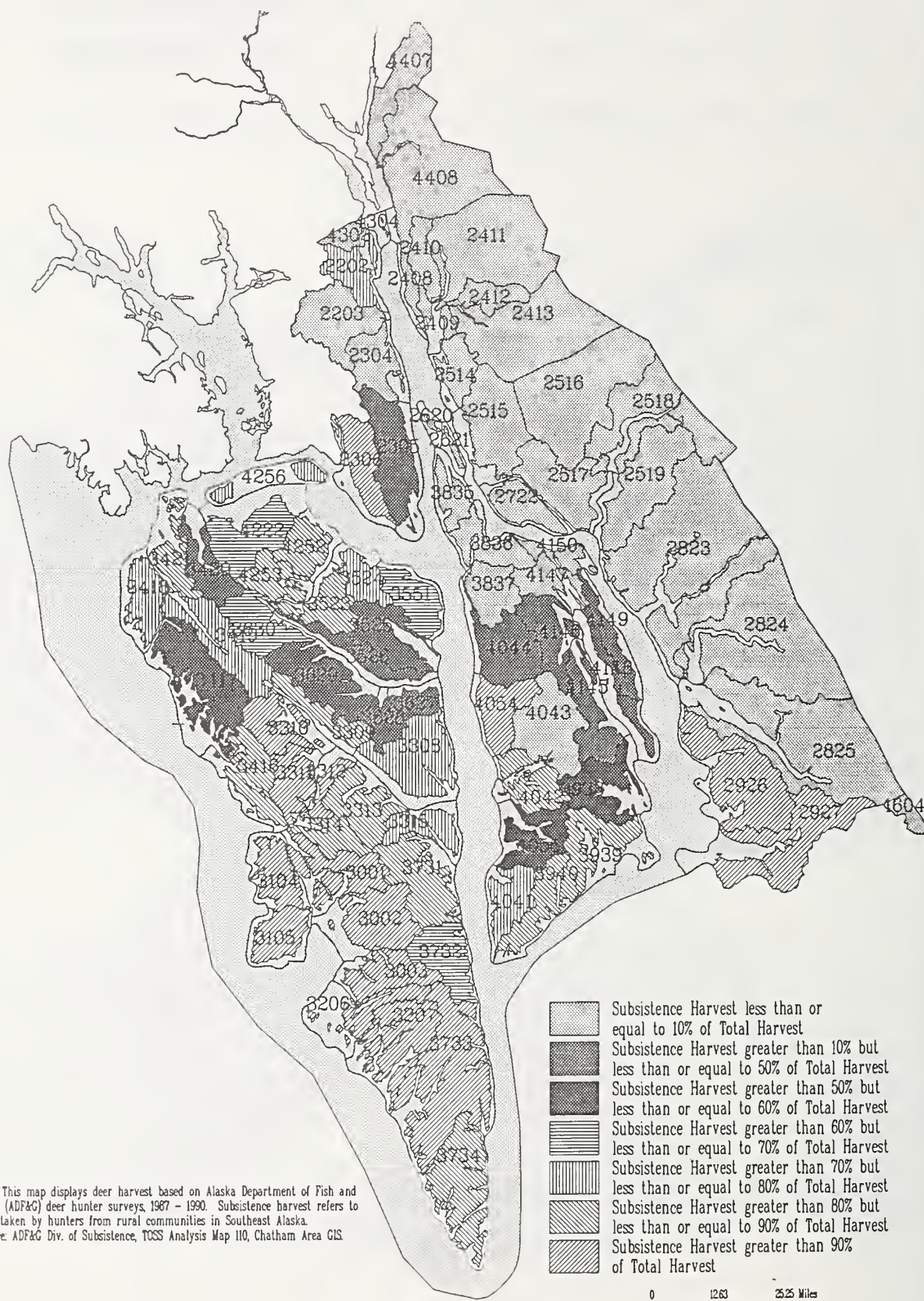


Figure E-46 (continued)
Subsistence Harvest as a Percentage of the Total Deer Harvest



0 12.5 25 Miles

Note: This map displays deer harvest based on Alaska Department of Fish and Game (ADF&G) deer hunter surveys, 1987 - 1990. Subsistence harvest refers to deer taken by hunters from rural communities in Southeast Alaska.
Source: ADF&G Div. of Subsistence, TOSS Analysis Map 110, Chatham Area GIS.

- Subsistence Harvest less than or equal to 10% of Total Harvest
- Subsistence Harvest greater than 10% but less than or equal to 50% of Total Harvest
- Subsistence Harvest greater than 50% but less than or equal to 60% of Total Harvest
- Subsistence Harvest greater than 60% but less than or equal to 70% of Total Harvest
- Subsistence Harvest greater than 70% but less than or equal to 80% of Total Harvest
- Subsistence Harvest greater than 80% but less than or equal to 90% of Total Harvest
- Subsistence Harvest greater than 90% of Total Harvest

Figure E-47

1990 Deer Demand as a Percentage of Deer Supply

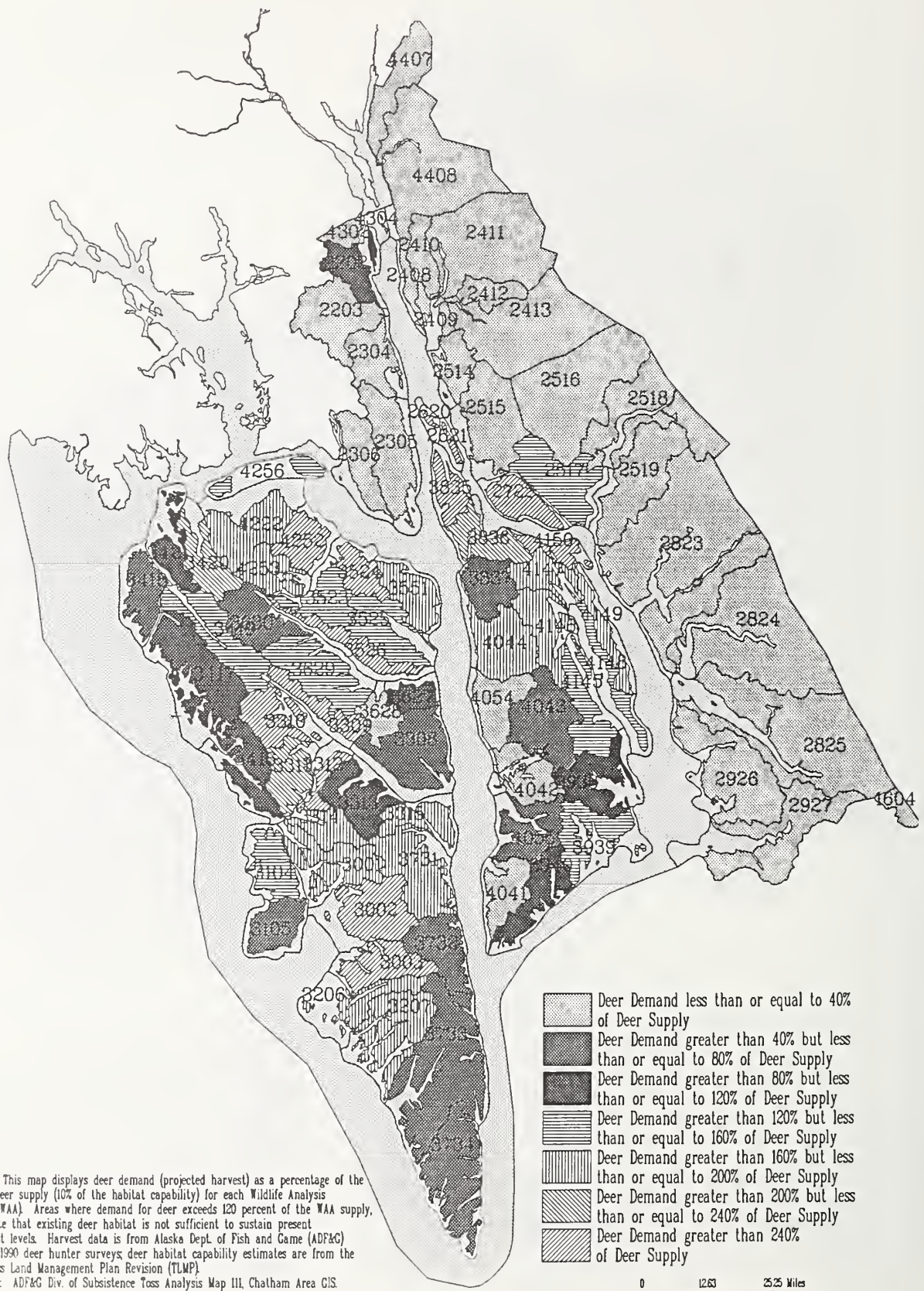


Figure E-47 (continued)
1990 Deer Demand as a Percentage of Deer Supply

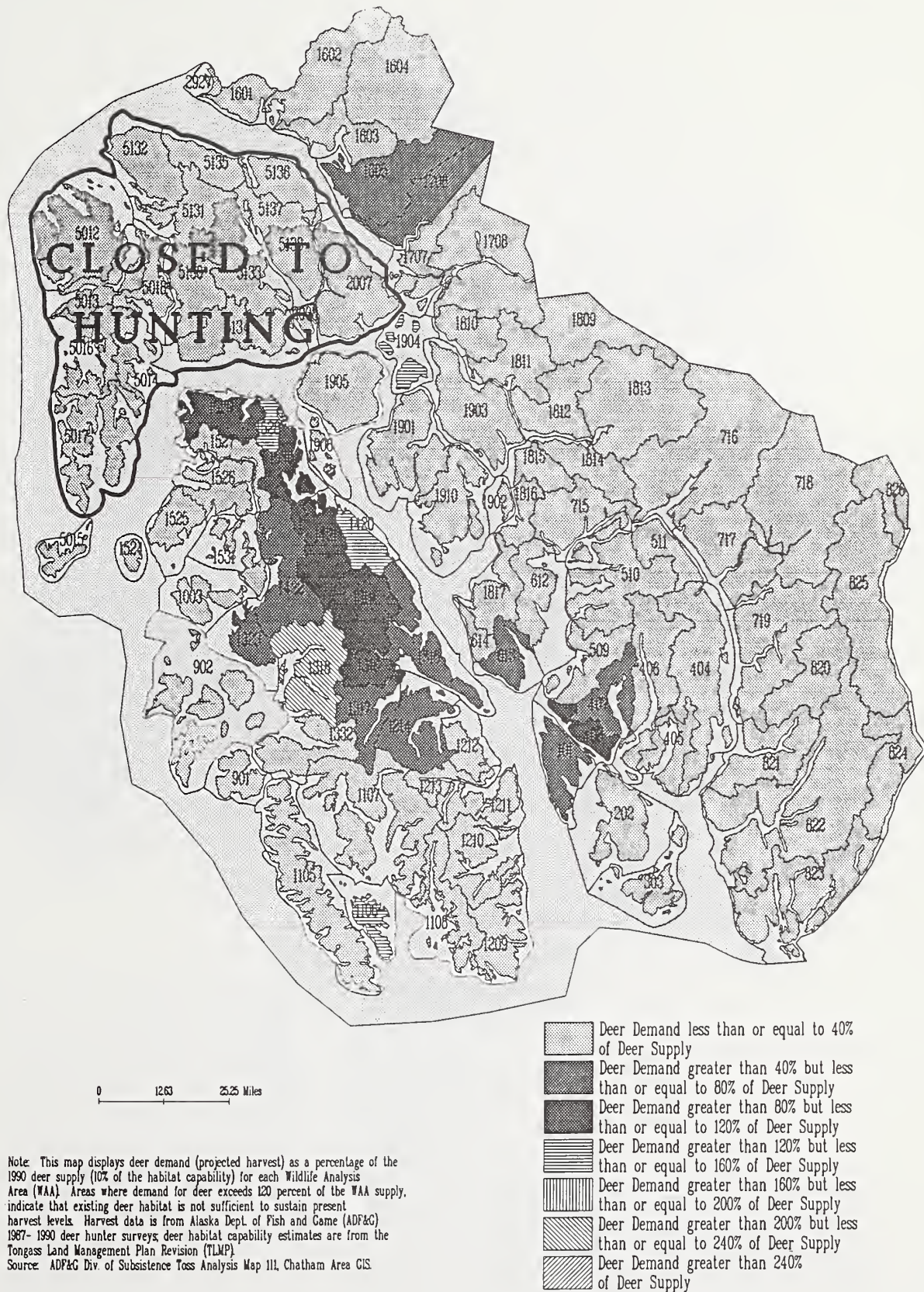


Figure E-48
2040 Projected Deer Demand as a Percentage of Deer Supply

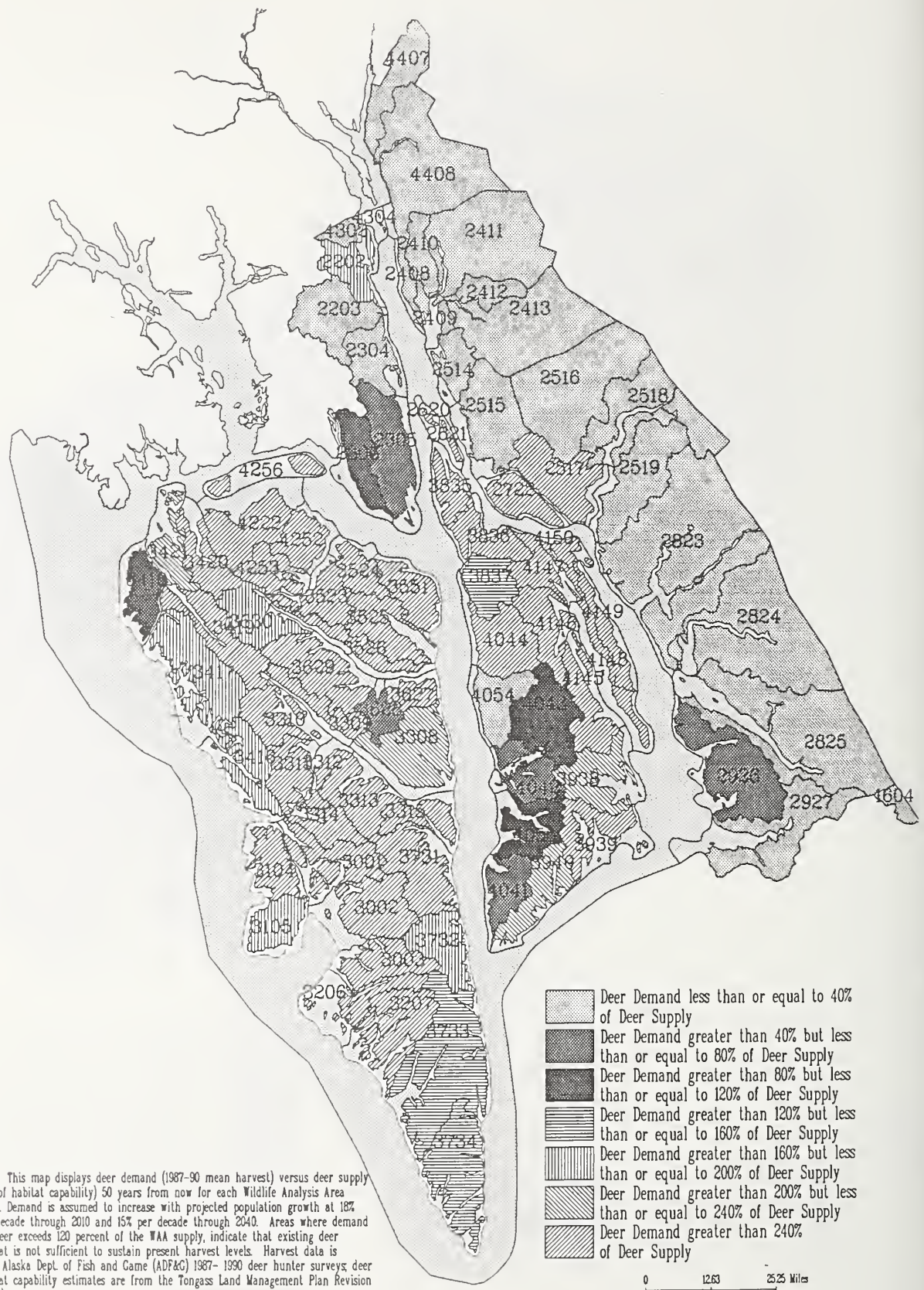


Figure E-48 (continued)
2040 Projected Deer Demand as a Percentage of Deer Supply



- Deer Demand less than or equal to 40% of Deer Supply
- Deer Demand greater than 40% but less than or equal to 80% of Deer Supply
- Deer Demand greater than 80% but less than or equal to 120% of Deer Supply
- Deer Demand greater than 120% but less than or equal to 160% of Deer Supply
- Deer Demand greater than 160% but less than or equal to 200% of Deer Supply
- Deer Demand greater than 200% but less than or equal to 240% of Deer Supply
- Deer Demand greater than 240% of Deer Supply

Note: This map displays deer demand (1987-90 mean harvest) versus deer supply (10% of habitat capability) 50 years from now for each Wildlife Analysis Area (WAA). Demand is assumed to increase with projected population growth at 18% per decade through 2010 and 15% per decade through 2040. Areas where demand for deer exceeds 120 percent of the WAA supply, indicate that existing deer habitat is not sufficient to sustain present harvest levels. Harvest data is from Alaska Dept. of Fish and Game (ADF&G) 1987-1990 deer hunter surveys; deer habitat capability estimates are from the Tongass Land Management Plan Revision (TLMP).

Source: ADF&G Div. of Subsistence Toss Analysis Map 112, Chatham Area GIS



Summary of Deer Harvest Supply and Demand by WAA and Community



Table E-20

Summary of Deer Harvest Supply and Demand by WAA and Community

Angoon									
	Comm. Mean						Mean Other Subs.	Mean Non-Subs.	Percent Comm.
Waa	Harvest	HC54	HC90	HC2000	HC2010	HC2040	Harvest	Harvest	Harvest
3308	25	4,189	3,160	2,800	2,464	2,244	133	66	9%
3315	27	1,428	1,328	1,081	961	883	142	55	10%
3551	11	1,999	1,768	1,314	1,314	1,080	185	90	4%
4041	24	2,165	2,165	2,165	2,165	2,165	17	13	9%
4042	69	2,626	2,626	2,626	2,626	2,626	(36)	47	25%
4044	12	1,315	1,315	1,315	1,315	1,315	83	152	4%
4054	36	2,266	2,266	2,266	2,266	2,266	0	3	13%
4055	47	2,616	2,616	2,616	2,616	2,616	22	61	17%
	248	18,604	17,244	16,183	15,727	15,195	544	486	
Haines									
	Comm. Mean						Mean Other Subs.	Mean Non-Subs.	Percent Comm.
Waa	Harvest	HC54	HC90	HC2000	HC2010	HC2040	Harvest	Harvest	Harvest
2202	10	136	136	136	136	136	0	3	4%
3002	5	1,100	861	826	826	826	565	42	2%
3310	7	1,238	1,174	1,174	1,174	1,174	336	25	3%
3312	14	485	473	359	359	359	180	3	6%
3417	4	3,028	3,028	3,028	3,028	3,028	166	114	2%
3418	11	1,817	1,817	1,817	1,817	1,817	62	26	5%
3420	34						8	72	15%
3421	15	835	835	833	833	833	62	10	6%
3525	7	2,509	2,149	1,666	1,493	1,356	140	156	3%
3526	20	1,434	1,213	1,027	866	738	57	244	8%
3551	7	1,999	1,768	1,314	1,314	1,080	189	90	3%
3628	9	1,101	1,093	1,093	1,093	1,092	6	24	4%
3629	35	1,942	1,798	1,293	1,290	1,079	55	148	15%
3630	22	527	527	565	455	419	4	14	9%
3731	7	1,217	1,149	1,059	1,016	988	176	26	3%
3938	8	3,159	3,159	3,159	3,159	3,159	173	136	3%
	211	22,527	21,180	19,349	18,859	18,084	2,177	1,132	

Table E-20 (Continued)

Summary of Deer Harvest Supply and Demand by WAA and Community

		Hoonah					Mean	Mean	Percent
	Comm.						Other Subs.	Non-Subs.	Comm.
Waa	Mean								
Harvest	Harvest	HC54	HC90	HC2000	HC2010	HC2040	Harvest	Harvest	Harvest
3523	156	1,421	1,342	1,194	1,041	962	23	21	22%
3524	120	260	260	214	214	177	80	55	17%
3551	80	1,999	1,768	1,314	1,314	1,080	116	90	11%
4222	86	2,258	2,217	2,008	1,963	1,844	168	120	12%
4252	118	454	454	381	373	314	144	59	17%
4253	95	1,162	1,026	823	792	697	62	26	13%
	654	7,554	7,067	5,934	5,697	5,074	592	370	

		Kake					Mean	Mean	Percent
	Comm.						Other Subs.	Non-Subs.	Comm.
Waa	Mean								
Harvest	Harvest	HC54	HC90	HC2000	HC2010	HC2040	Harvest	Harvest	Harvest
3311	6	1,466	1,443	1,136	1,136	1,061	320	5	3%
3731	9	1,217	1,149	1,059	1,016	988	174	26	4%
3938	21	3,159	3,159	3,159	3,159	3,159	160	136	10%
3939	55	2,854	2,854	2,854	2,854	2,854	280	47	25%
3940	98	2,580	2,580	2,580	2,580	2,580	161	28	45%
4041	12	2,165	2,165	2,165	2,165	2,165	29	13	5%
	199	13,441	13,350	12,953	12,910	12,807	1,122	254	

Table E-20 (Continued)

Summary of Deer Harvest Supply and Demand by WAA and Community

Meyers Chuck

	Comm. Mean						Mean Other Subs.	Mean Non-Subs.	Percent Comm.
Waa	Harvest	HC54	HC90	HC2000	HC2010	HC2040	Harvest	Harvest	Harvest
613	4	1,616	1,560	1,560	1,560	1,465	0	117	17%
614	6	631	631	495	495	405	0	8	27%
1214	1	1,934	1,749	1,805	1,426	976	36	55	2%
1315	2	3,780	2,838	2,659	2,403	1,528	105	44	7%
1526	4	2,891	2,772	2,731	2,657	2,528	50	15	17%
1531	2	3,230	2,623	2,052	1,831	1,525	41	6	7%
1817	3	1,625	1,625	1,625	1,625	1,451	0	18	12%
	19	15,707	13,798	12,927	11,997	9,878	231	262	

Petersburg

	Comm. Mean						Mean Other Subs.	Mean Non-Subs.	Percent Comm.
Waa	Harvest	HC54	HC90	HC2000	HC2010	HC2040	Harvest	Harvest	Harvest
1316	24	828	827	827	827	827	30	24	2%
1323	19	1,996	1,981	1,820	1,779	1,511	54	25	1%
1526	26	2,891	2,772	2,731	2,657	2,528	28	15	2%
1528	16	439	378	378	361	327	28	12	1%
1529	32	3,121	2,501	1,935	1,774	1,586	140	54	2%
1605	46	1,081	840	840	840	745	0	0	3%
1706	16	280	280	280	280	280	0	0	1%
3308	40	4,189	3,160	2,800	2,464	2,244	118	66	3%
3309	38	960	960	798	797	786	206	40	3%
3313	22	2,281	1,614	1,213	1,078	930	122	22	2%
3315	94	1,428	1,328	1,081	961	883	75	55	7%
3525	14	2,509	2,149	1,666	1,493	1,356	133	156	1%
3731	113	1,217	1,149	1,059	1,016	988	70	26	8%
3732	14	287	287	287	287	287	1	9	1%
3733	25	1,798	1,798	1,798	1,798	1,798	97	3	2%
3938	122	3,159	3,159	3,159	3,159	3,159	59	136	9%
3939	290	2,854	2,854	2,854	2,854	2,854	45	47	22%
3940	152	2,580	2,580	2,580	2,580	2,580	106	28	11%
4055	22	2,616	2,616	2,616	2,616	2,616	47	61	2%
4145	18	1,196	1,196	1,196	1,196	1,196	0	153	1%
4146	23	824	824	824	824	824	6	113	2%
4148	27	1,678	1,678	1,678	1,678	1,678	11	178	2%
4149	14	1,256	1,256	1,256	1,256	1,256	13	176	1%
	1,204	41,468	38,187	35,676	34,575	33,239	1,385	1,395	

Table E-20 (Continued)

Summary of Deer Harvest Supply and Demand by WAA and Community

	Comm.	Sitka					Mean	Mean	Percent
	Mean						Other Subs.	Non-Subs.	Comm.
Waa	Harvest	HC54	HC90	HC2000	HC2010	HC2040	Harvest	Harvest	Harvest
3001	635	3,831	3,408	2,750	2,741	2,731	10	24	15%
3002	563	1,100	861	826	826	826	7	42	13%
3003	364	1,588	1,530	1,279	1,279	1,253	4	21	8%
3104	357	3,440	3,070	2,568	2,490	2,394	0	22	8%
3105	176	2,438	2,429	2,340	2,340	2,340	1	16	4%
3206	171	1,017	1,017	1,015	1,015	1,015	6	8	4%
3207	134	812	812	812	812	812	5	1	3%
3309	206	960	960	798	797	786	38	40	5%
3310	316	1,238	1,174	1,174	1,174	1,174	27	25	7%
3311	308	1,466	1,443	1,136	1,136	1,061	18	5	7%
3312	175	485	473	359	359	359	19	3	4%
3313	107	2,281	1,614	1,213	1,078	930	37	22	2%
3314	159	998	926	652	652	652	4	20	4%
3416	134	1,821	1,821	1,821	1,821	1,821	3	16	3%
3417	124	3,028	3,028	3,028	3,028	3,028	46	114	3%
	3,927	26,503	24,566	21,771	21,548	21,182	224	377	

	Comm.	Skagway					Mean	Mean	Percent
	Mean						Other Subs.	Non-Subs.	Comm.
Waa	Harvest	HC54	HC90	HC2000	HC2010	HC2040	Harvest	Harvest	Harvest
3310	8	1,238	1,174	1,174	1,174	1,174	335	25	28%
3524	2	260	260	214	214	177	198	55	7%
3526	2	1,434	1,213	1,027	866	738	75	244	7%
3629	5	1,942	1,798	1,293	1,290	1,079	84	148	18%
3836	6	1,812	1,812	1,513	1,513	1,357	7	362	20%
4044	2	1,315	1,315	1,315	1,315	1,315	93	152	5%
4146	2	824	824	824	824	824	27	113	7%
	27	8,825	8,396	7,360	7,196	6,664	817	1,100	

Table E-20 (Continued)

Summary of Deer Harvest Supply and Demand by WAA and Community

Waa	Comm.	Tenakee Springs					Mean	Mean	Percent
	Mean						Other Subs.	Non-Subs.	Comm.
	Harvest	HC54	HC90	HC2000	HC2010	HC2040	Harvest	Harvest	Harvest
3525	7	2,509	2,149	1,666	1,493	1,356	140	156	8%
3526	50	1,434	1,213	1,027	866	738	27	244	58%
3627	6	1,011	899	796	715	662	15	61	7%
3629	16	1,942	1,798	1,293	1,290	1,079	73	148	19%
3628	5								
	84	6,896	6,059	4,782	4,364	3,835	255	609	

Waa	Comm.	Wrangell					Mean	Mean	Percent
	Mean						Other Subs.	Non-Subs.	Comm.
	Harvest	HC54	HC90	HC2000	HC2010	HC2040	Harvest	Harvest	Harvest
1319	7	3,495	2,857	2,647	2,423	1,795	239	41	2%
1420	6	1,718	1,035	829	758	480	90	70	2%
1528	12	439	378	378	361	327	31	12	3%
1529	6	3,121	2,501	1,935	1,774	1,586	166	54	2%
1530	77	2,587	1,861	1,737	1,666	1,390	66	64	21%
1901	6	3,679	3,544	3,325	3,178	2,398	10	4	2%
1903	25	2,863	2,675	2,666	2,416	2,004	0	0	7%
1904	85	830	627	607	550	455	11	0	23%
1905	10	3,585	2,974	2,882	2,331	1,872	13	3	3%
1906	24	917	793	787	787	727	5	0	7%
1910	16	3,602	3,588	3,589	3,572	3,478	0	7	4%
3311	8	1,466	1,443	1,136	1,136	1,061	317	5	2%
3313	6	2,281	1,614	1,213	1,078	930	138	22	2%
3731	8	1,217	1,149	1,059	1,016	988	174	26	2%
3733	21	1,798	1,798	1,798	1,798	1,798	101	3	6%
3734	7	2,026	2,026	2,026	2,026	2,026	105	19	2%
3938	9	3,159	3,159	3,159	3,159	3,159	172	136	2%
	331	38,783	34,022	31,773	30,029	26,474	1,638	464	



**Community Deer Harvest
by Wildlife Analysis Area
and Year**

Table E-21

Angoon Deer Harvest by WAA and Year

WAA	GMU	YEAR	Angoon Harvest	Total WAA Harvest	Percent of Angoon Harvest	Percent of Waa Harvest	WAA Change?	WAA Location
3308	42	1987	41	361	8%	11%	N	KOOK LAKE, SITKOH BAY, FALSE IS.
3313	42	1987	14	217	3%	6%	N	RODMAN AND SAOOK BAY DRAINAGES
3315	42	1987	41	218	8%	19%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
4041	42	1987	149	282	30%	53%	Y	WHITEWATER BAY, WILSON COVE
4042	42	1987	243	295	49%	82%	Y	ANGOON AREA
4043	42	1987	7	0	1%	0%	N	CENTRAL ADMIRALTY LAKES
4044	42	1987	0	107	0%	0%	Y	SHEE-ATIKA DRAINAGES
Total			495					
3308	42	1988	13	186	6%	7%	N	KOOK LAKE, SITKOH BAY, FALSE IS.
3313	42	1988	3	125	1%	2%	N	RODMAN AND SAOOK BAY DRAINAGES
3315	42	1988	13	184	6%	7%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
3627	42	1988	3	111	1%	3%	N	CORNER BAY, TRAP BAY
4041	42	1988	0	27	0%	0%	Y	WHITEWATER BAY, WILSON COVE
4042	42	1988	103	134	44%	77%	Y	ANGOON AREA
4043	42	1988	10	92	4%	11%	N	CENTRAL ADMIRALTY LAKES
4044	42	1988	3	111	1%	3%	Y	SHEE-ATIKA DRAINAGES
4045	42	1988	19	82	8%	23%	Y	FISHERY, THAYER CREEKS
4046	42	1988	68	116	29%	59%	Y	HOOD BAY, CHAIK BAY DRAINAGES
Total			235					
3308	42	1989	46	187	16%	25%	N	KOOK LAKE, SITKOH BAY, FALSE IS.
3313	42	1989	10	187	4%	5%	N	RODMAN AND SAOOK BAY DRAINAGES
3315	42	1989	49	216	17%	23%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
3627	42	1989	10	95	4%	11%	N	CORNER BAY, TRAP BAY
3940	42	1989	7	157	2%	4%	N	PT. GARDNER, ELIZA HARBOR
4041	42	1989	23	43	8%	53%	Y	WHITEWATER BAY, WILSON COVE
4042	42	1989	69	79	24%	87%	Y	ANGOON AREA
4043	42	1989	7	42	2%	17%	N	CENTRAL ADMIRALTY LAKES
4044	42	1989	10	199	4%	5%	Y	SHEE-ATIKA DRAINAGES
4054	42	1989	7	12	2%	58%	Y	FISHERY, THAYER CREEKS
4055	42	1989	46	75	16%	61%	Y	HOOD BAY, CHAIK BAY DRAINAGES
Total			284					

Table E-21 (Continued)

Angoon Deer Harvest by WAA and Year

WAA	GMU	YEAR	Angoon Harvest	Total WAA Harvest	Percent of Angoon Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
3001	42	1990	8	783	3%	1%	Y	NAKHASINA, NEVA STRAIT AREA
3207	42	1990	13	99	5%	13%	N	CRAWFISH INLETS, NECKAR BAY
3313	42	1990	4	137	1%	3%	N	RODMAN AND SAOOK BAY DRAINAGES
3314	42	1990	0	230	0%	0%	Y	FISH BAY DRAINAGES
3315	42	1990	4	274	1%	1%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
3551	42	1990	21	263	8%	8%	Y	WHITESTONE HARBOR, FALSE BAY DRAINAGES
3731	42	1990	4	154	1%	3%	N	KELP BAY-TAKATZ BAY
3837	42	1990	4	102	1%	4%	N	WHEELER, GREENS CREEKS DRAINAGES
4041	42	1990	25	64	9%	39%	Y	WHITEWATER BAY, WILSON COVE
4042	42	1990	68	80	25%	85%	Y	ANGOON AREA
4044	42	1990	13	294	5%	4%	Y	SHEE-ATIKA DRAINAGES
4054	42	1990	64	64	23%	100%	Y	FISHERY, THAYER CREEKS
4055	42	1990	47	183	17%	26%	Y	HOOD BAY, CHAIK BAY DRAINAGES
		Total	275					

Note: Some WAA boundaries and/or numbers have changed since 1987.

Source: ADF&G, Division of Wildlife Conservation harvest records.

Table E-22

Haines Deer Harvest by WAA and Year

WAA	GMU	YEAR	Haines Harvest	Total WAA Harvest	Percent of Haines Harvest	Percent of Waa Harvest	WAA Change?	WAA Location
1527	2Z	1987	0	416	0%	0%	Y	EXCHANGE COVE, WHALE PASSAGE
2202	1C	1987	0	0	0%	0%	N	SULLIVAN RIVER AND ISLAND
2305	1C	1987	4	9	1%	44%	N	SOUTHERN CHILKAT RANGE
2514	1C	1987	0	0	0%	0%	N	COMEE, DAVIES CREEKS
2515	1C	1987	0	0	0%	0%	N	EAGLE RIVER-MENDENHALL RIVER AREA
2722	1C	1987	0	380	0%	0%	N	DOUGLAS IS.
3001	4Z	1987	0	1248	0%	0%	Y	MAKUASINA, NEVA STRAIT AREA
3206	4Z	1987	9	286	2%	3%	N	REDOUBT LAKE, NECKAR ISLANDS
3417	4Z	1987	4	379	1%	1%	N	WEST COAST CHICHAGOF
3418	4Z	1987	17	123	4%	14%	N	YAKOBI IS.
3419	4Z	1987	22	202	5%	11%	Y	PORT ALTHORP, LOWER LISIANSKI, INIAN IS.
3420	4Z	1987	56	173	12%	32%	N	IDAHO INLET DRAINAGES
3521	4Z	1987	22	121	5%	18%	N	LEMESURIER, PLEASANT ISLANDS
3522	4Z	1987	56	284	12%	20%	Y	PT. ADOLPHUS, MUD BAY AREA
3523	4Z	1987	82	1066	18%	8%	Y	HOONAH AREA
3524	4Z	1987	17	261	4%	7%	Y	HOONAH AREA
3625	4Z	1987	0	535	0%	0%	Y	FRESHWATER BAY DRAINAGES
3626	4Z	1987	30	252	7%	12%	Y	NORTH SHORE TENAKEE INLET
3628	4Z	1987	13	42	3%	31%	N	KADASHAN
3629	4Z	1987	69	404	15%	17%	N	SOUTHERN SHORE TENAKEE INLET
3630	4Z	1987	39	100	8%	39%	Y	UPPER TENAKEE INLET
3836	4Z	1987	0	478	0%	0%	N	HAWK INLET, YOUNG BAY DRAINAGES
4147	4Z	1987	4	595	1%	1%	Y	UPPER SEYMOUR CANAL
9999	NA	1987	17	216	4%	8%	Y	NA
		Total	461					
1107	2Z	1988	0	49	0%	0%	N	HYDABURG, HETTA INLET, SUKKWAN IS.
1211	2Z	1988	0	79	0%	0%	N	KITKUN, SOUTH ARM CHOLMONDELEY
1214	2Z	1988	0	93	0%	0%	N	SKOWL ARM, POLK INLET
2202	1C	1988	5	18	1%	28%	N	SULLIVAN RIVER AND ISLAND
2621	1C	1988	5	36	1%	14%	N	SHELTER IS.
2722	1C	1988	0	318	0%	0%	N	DOUGLAS IS.
3312	4Z	1988	56	179	12%	31%	N	DUFFIELD PENIN., BEAR BAY
3420	4Z	1988	42	103	9%	41%	N	IDAHO INLET DRAINAGES

Table E-22 (Continued)

Haines Deer Harvest by WAA and Year

WAA	GMU	YEAR	Haines Harvest	Total WAA Harvest	Percent of Haines Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
3522	4Z	1988	61	155	13%	39%	Y	PT. ADOLPHUS, MUD BAY AREA
3523	4Z	1988	19	185	4%	10%	Y	EAST SIDE PORT FREDERICK, GAME CREEK
3524	4Z	1988	42	443	9%	9%	Y	HOONAH AREA
3525	4Z	1988	19	365	4%	5%	Y	FRESHWATER BAY DRAINAGES
3531	4Z	1988	19	145	4%	13%	Y	WHITESTONE HARBOR, FALSE BAY DRAINAGES
3532	4Z	1988	47	316	10%	15%	Y	HUMPBAC, GALLAGHER CREEKS
3533	4Z	1988	19	118	4%	16%	Y	HUMPBAC, GALLAGHER CREEKS
3627	4Z	1988	14	111	3%	13%	N	CORNER BAY, TRAP BAY
3628	4Z	1988	23	71	5%	32%	N	KADASHAN
3629	4Z	1988	52	232	11%	22%	N	SOUTHERN SHORE TENAKEE INLET
3630	4Z	1988	19	31	4%	61%	Y	UPPER TENAKEE INLET
3938	4Z	1988	19	317	4%	6%	N	GAMBIER BAY DRAINAGES
Total			461					
1106	2Z	1989	0	34	0%	0%	N	LONG IS.
1319	2Z	1989	4	195	1%	2%	N	THORNE RIVER DRAINAGE
1422	2Z	1989	0	375	0%	0%	Y	STANEY CREEK, NAUKATI, SARKAR
2202	1C	1989	4	4	1%	100%	N	SULLIVAN RIVER AND ISLAND
2722	1C	1989	0	321	0%	0%	N	DOUGLAS IS.
3417	4Z	1989	13	248	4%	5%	N	WEST COAST CHICHAGOF
3418	4Z	1989	4	91	1%	4%	N	YAKOBI IS.
3420	4Z	1989	26	99	7%	26%	N	IDAHO INLET DRAINAGES
3421	4Z	1989	26	109	7%	24%	Y	PORT ALTHORP, LOWER LISIANSKI, INIAN IS.
3523	4Z	1989	4	156	1%	3%	Y	EAST SIDE PORT FREDERICK, GAME CREEK
3524	4Z	1989	4	289	1%	1%	Y	HOONAH AREA
3525	4Z	1989	13	289	4%	4%	Y	FRESHWATER BAY DRAINAGES
3526	4Z	1989	26	286	7%	9%	Y	NORTH SHORE TENAKEE INLET
3629	4Z	1989	17	174	5%	10%	N	SOUTHERN SHORE TENAKEE INLET
3630	4Z	1989	21	40	6%	53%	Y	UPPER TENAKEE INLET
3836	4Z	1989	0	334	0%	0%	N	HAWK INLET, YOUNG BAY DRAINAGES
3938	4Z	1989	13	238	4%	5%	N	GAMBIER BAY DRAINAGES
3939	4Z	1989	4	346	1%	1%	N	PYBUS BAY DRAINAGES
3940	4Z	1989	4	157	1%	3%	N	PT. GARDNER, ELIZA HARBOR
4149	4Z	1989	13	206	4%	6%	Y	EAST SIDE GLASS PENIN.

Table E-22 (Continued)

Haines Deer Harvest by WAA and Year

WAA	GMU	YEAR	Haines Harvest	Total		Percent of Haines Harvest	Percent of Waa Harvest	WAA Change?	WAA Location
				WAA Harvest	Harvest				
4222	4Z	1989	98	257	28%	38%	Y	PT ADOLPHUS, MUD BAY AREA	
4252	4Z	1989	21	373	6%	6%	Y	HUMBACK, GALLAGHER CREEKS	
4253	4Z	1989	38	200	11%	19%	Y	NEKA BAY DRAINAGES	
		Total	353						
1106	2Z	1990	0	127	0%	0%	N	LONG IS.	
2202	1C	1990	30	30	9%	100%	N	SULLIVAN RIVER AND ISLAND	
3001	4Z	1990	4	783	1%	1%	Y	NAKASINA, NEVA STRAIT AREA	
3002	4Z	1990	9	585	3%	2%	Y	SITKA ROAD SYSTEM	
3104	4Z	1990	0	236	0%	0%	N	NORTHERN KRUFZOF IS.	
3105	4Z	1990	4	200	1%	2%	N	SOUTHERN KRUFZOF IS.	
3309	4Z	1990	0	371	0%	0%	Y	NORTHERN SHORE HOONAH SOUND	
3310	4Z	1990	13	370	4%	4%	Y	SOUTH ARM HOONAH SOUND	
3418	4Z	1990	22	101	6%	22%	N	YAKOBI IS.	
3420	4Z	1990	13	81	4%	16%	N	IDAHO INLET DRAINAGES	
3421	4Z	1990	4	64	1%	6%	Y	PORT ALTHORP, LOWER LISIANSKI, INIAN IS.	
3525	4Z	1990	0	316	0%	0%	Y	FRESHWATER BAY DRAINAGES	
3526	4Z	1990	13	355	4%	4%	Y	NORTH SHORE TENAKEE INLET	
3551	4Z	1990	13	263	4%	5%	Y	WHITESTONE HARBOR, FALSE BAY DRAINAGES	
3630	4Z	1990	22	39	6%	56%	Y	UPPER TENAKEE INLET	
3731	4Z	1990	26	154	7%	17%	N	KELP BAY-TAKATZ BAY	
3835	4Z	1990	4	339	1%	1%	N	NORTHERN MANSFIELD PENIN.	
3939	4Z	1990	0	420	0%	0%	N	PYBUS BAY DRAINAGES	
3940	4Z	1990	13	557	4%	2%	N	PT. GARDNER, ELIZA HARBOR	
4149	4Z	1990	13	200	4%	7%	Y	EAST SIDE GLASS PENIN.	
4150	4Z	1990	9	281	3%	3%	Y	GRAND IS., OLIVER INLET, STINK CREEK	
4222	4Z	1990	139	490	40%	28%	Y	PT ADOLPHUS, MUD BAY AREA	
		Total	351						

Note: Some WAA boundaries and/or numbers have changed since 1987.

Source: ADF&G, Division of Wildlife Conservation harvest records.

Table E-23

Hoonah Deer Harvest by WAA and Year

WAA	GMU	YEAR	Hoonah Harvest	Total WAA Harvest	Percent of Hoonah Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
3522	42	1987	130	284	17%	46%	Y	PT. ADOLPHUS, MUD BAY AREA
3523	42	1987	369	1066	49%	35%	Y	HOONAH AREA
3524	42	1987	110	261	15%	42%	Y	EAST SIDE PORT FREDERICK, GAME CREEK
3625	42	1987	140	535	19%	26%	Y	WHITESTONE HARBOR, FALSE BAY DRAINAGES
Total			749					
3521	42	1988	33	0	5%	0%	N	LEMESURIER, PLEASANT ISLANDS
3522	42	1988	33	155	5%	21%	Y	PT. ADOLPHUS, MUD BAY AREA
3523	42	1988	67	185	10%	36%	Y	EAST SIDE PORT FREDERICK, GAME CREEK
3524	42	1988	178	443	27%	40%	Y	HOONAH AREA
3525	42	1988	56	365	9%	15%	Y	FRESHWATER BAY DRAINAGES
3531	42	1988	33	145	5%	23%	Y	WHITESTONE HARBOR, FALSE BAY DRAINAGES
3532	42	1988	178	316	27%	56%	Y	HUMPBACK, GALLAGHER CREEKS
3533	42	1988	78	118	12%	66%	Y	HUMPBACK, GALLAGHER CREEKS
Total			656					
1315	22	1989	0	92	0%	0%	N	KASAAN PENINSULA, THORNE BAY
1319	22	1989	0	195	0%	0%	N	THORNE RIVER DRAINAGE
1421	22	1989	0	224	0%	0%	N	SWEETWATER LAKE, LOGJAM CREEK
1422	22	1989	0	375	0%	0%	Y	STANEY CREEK, NAUKATI, SARKAR
3523	42	1989	106	156	20%	68%	Y	EAST SIDE PORT FREDERICK, GAME CREEK
3524	42	1989	93	289	18%	32%	Y	HOONAH AREA
3525	42	1989	7	289	1%	2%	Y	FRESHWATER BAY DRAINAGES
3551	42	1989	86	307	16%	28%	Y	WHITESTONE HARBOR, FALSE BAY DRAINAGES
4222	42	1989	40	257	8%	16%	Y	PT. ADOLPHUS, MUD BAY AREA
4252	42	1989	119	373	22%	32%	Y	HUMPBACK, GALLAGHER CREEKS
4253	42	1989	73	200	14%	37%	Y	NEKA BAY DRAINAGES
4256	42	1989	7	105	1%	7%	Y	LEMESURIER, PLEASANT ISLANDS
Total			531					

Table E-23 (Continued)

Hoonah Deer Harvest by WAA and Year

WAA	GMU	YEAR	Hoonah Harvest	Total WAA Harvest	Percent of Hoonah Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
3523	4Z	1990	205	242	23%	85%	Y	EAST SIDE PORT FREDERICK, GAME CREEK
3524	4Z	1990	146	220	16%	66%	Y	HOONAH AREA
3525	4Z	1990	102	316	11%	32%	Y	FRESHWATER BAY DRAINAGES
3551	4Z	1990	73	263	8%	28%	Y	WHITESTONE HARBOR, FALSE BAY DRAINAGES
4222	4Z	1990	132	490	15%	27%	Y	PT. ADOLPHUS, MUD BAY AREA
4252	4Z	1990	117	267	13%	44%	Y	HUMPBACK, GALLAGHER CREEKS
4253	4Z	1990	117	166	13%	70%	Y	NEKA BAY DRAINAGES
Total			892					

Note: Some WAA boundaries and/or numbers have changed since 1987.

Source: ADF&G, Division of Wildlife Conservation harvest records.

Table E-24
Juneau Deer Harvest by WAA and Year

WAA	GHU	YEAR	Juneau Harvest	Total WAA Harvest	Percent of Juneau Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
407	1A	1987	0	76	0%	0%	N	GEORGE INLET
509	1A	1987	0	66	0%	0%	Y	NAHA AREA
1212	2Z	1987	5	31	0%	16%	Y	CLOVER MTN.
1315	2Z	1987	5	235	0%	2%	N	KASAAH PENINSULA, THORNE BAY
1316	2Z	1987	0	140	0%	0%	N	KARTA BAY
1317	2Z	1987	0	122	0%	0%	N	TWELVE MILE ARM, HARRIS RIVER
1318	2Z	1987	10	494	0%	2%	Y	CRAIG, KLAHOCK AREAS
1421	2Z	1987	15	539	0%	3%	N	SWEETWATER LAKE, LOGJAM CREEK
1422	2Z	1987	0	495	0%	0%	Y	STANEY CREEK, NAUKATI, SARKAR
1527	2Z	1987	5	416	0%	1%	Y	EXCHANGE COVE, WHALE PASSAGE
1529	2Z	1987	0	295	0%	0%	N	MT. CALDER, RED BAY, PORT PROTECTION
1903	3Z	1987	0	25	0%	0%	N	WRANGELL IS.
2202	1C	1987	0	0	0%	0%	N	SULLIVAN RIVER AND ISLAND
2305	1C	1987	5	9	0%	56%	N	SOUTHERN CHILKAT RANGE
2409	1C	1987	0	0	0%	0%	N	BERNERS BAY
2514	1C	1987	0	0	0%	0%	N	COWEE, DAVIES CREEKS
2515	1C	1987	0	0	0%	0%	N	EAGLE RIVER-MENDENHALL RIVER AREA
2517	1C	1987	20	20	0%	100%	N	JUNEAU AND LOWER TAKU
2620	1C	1987	39	39	1%	100%	N	LINCOLN IS.
2621	1C	1987	73	73	1%	100%	N	SHELTER IS.
2722	1C	1987	376	380	8%	99%	N	DOUGLAS IS.
3002	4Z	1987	0	437	0%	0%	Y	SITKA ROAD SYSTEM
3003	4Z	1987	15	531	0%	3%	Y	SILVER BAY, DEEP INLET
3104	4Z	1987	15	585	0%	3%	N	NORTHERN KRUFOS IS.
3105	4Z	1987	10	383	0%	3%	N	SOUTHERN KRUFOS IS.
3308	4Z	1987	54	361	1%	15%	N	KOOK LAKE, SITKOH BAY, FALSE IS.
3309	4Z	1987	15	190	0%	8%	Y	NORTHERN SHORE HOONAH SOUND
3310	4Z	1987	34	402	1%	8%	Y	SOUTH ARM HOONAH SOUND
3311	4Z	1987	0	518	0%	0%	Y	USHK BAY-KAKUL NARROWS
3417	4Z	1987	122	379	2%	32%	N	WEST COAST CHICHAGOF
3418	4Z	1987	49	123	1%	40%	N	YAKOBI IS.
3419	4Z	1987	39	202	1%	19%	Y	PORT ALTHORP, LOWER LISIANSKI, INIAN IS.
3420	4Z	1987	112	173	2%	65%	N	IDAHO INLET DRAINAGES
3521	4Z	1987	29	121	1%	24%	N	LEMESURIER, PLEASANT ISLANDS
3522	4Z	1987	63	284	1%	22%	Y	PT. ADOLPHUS, MUD BAY AREA

Table E-24 (Continued)
Juneau Deer Harvest by WAA and Year

WAA	GNU	YEAR	Juneau Harvest	Total WAA Harvest	Percent of Juneau Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
3523	42	1987	420	1066	8%	39%	Y	HOONAH AREA
3524	42	1987	102	261	2%	39%	Y	HOONAH AREA
3625	42	1987	254	535	5%	47%	Y	WHITESTONE HARBOR, FALSE BAY DRAINAGES
3626	42	1987	166	252	3%	66%	Y	NORTH SHORE TENAKEE INLET
3627	42	1987	44	46	1%	96%	N	CORNER BAY, TRAP BAY
3628	42	1987	20	42	0%	48%	N	KADASHAN
3629	42	1987	224	404	5%	55%	N	SOUTHERN SHORE TENAKEE INLET
3630	42	1987	44	100	1%	44%	Y	UPPER TENAKEE INLET
3731	42	1987	15	131	0%	11%	N	KELP BAY-TAKATZ BAY
3732	42	1987	15	20	0%	75%	N	WARM SPRINGS COAST
3734	42	1987	0	93	0%	0%	N	SOUTHERN BARANOF IS.
3835	42	1987	400	435	8%	92%	N	NORTHERN MANSFIELD PENIN.
3836	42	1987	468	478	9%	98%	N	HAWK INLET, YOUNG BAY DRAINAGES
3837	42	1987	39	39	1%	100%	N	WHEELER, GREENS CREEKS DRAINAGES
3938	42	1987	83	264	2%	31%	N	GAMBIER BAY DRAINAGES
3939	42	1987	39	405	1%	10%	N	PYBUS BAY DRAINAGES
3940	42	1987	20	225	0%	9%	N	PT. GARDNER, ELIZA HARBOR
4041	42	1987	98	282	2%	35%	Y	WHITEWATER BAY, WILSON COVE
4042	42	1987	34	295	1%	12%	Y	ANGOON AREA
4043	42	1987	117	171	2%	68%	N	CENTRAL ADMIRALTY LAKES
4044	42	1987	107	107	2%	100%	Y	SHEE-ATIKA DRAINAGES
4145	42	1987	117	146	2%	80%	N	TIEDEMAN IS.-MOLE HARBOR AREA
4146	42	1987	146	240	3%	61%	N	WINDFALL HARBOR, SWAN COVE DRAINAGES
4147	42	1987	566	595	11%	95%	Y	GRAND IS., OLIVER INLET, STINK CREEK
4148	42	1987	302	311	6%	97%	Y	WEST SIDE GLASS PENIN.
Total			4950					
407	1A	1988	0	104	0%	0%	N	GEORGE INLET
1210	2Z	1988	0	13	0%	0%	N	MOIRA SOUND
1530	2Z	1988	6	201	0%	3%	Y	EXCHANGE COVE, WHALE PASSAGE
2202	1C	1988	13	18	0%	72%	N	SULLIVAN RIVER AND ISLAND
2305	1C	1988	6	6	0%	100%	N	SOUTHERN CHILKAT RANGE
2514	1C	1988	0	0	0%	0%	N	COWEE, DAVIES CREEKS
2515	1C	1988	0	0	0%	0%	N	EAGLE RIVER-MENDENHALL RIVER AREA

Table E-24 (Continued)
Juneau Deer Harvest by WAA and Year

WAA	GMU	YEAR	Juneau Harvest	Total WAA Harvest	Percent of Juneau Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
2517	1C	1988	0	17	0%	0%	N	JUNEAU AND LOWER TAKU
2620	1C	1988	25	25	1%	100%	N	LINCOLN IS.
2621	1C	1988	31	36	1%	86%	N	SHELTER IS.
2722	1C	1988	313	318	8%	98%	N	DOUGLAS IS.
2823	1C	1988	0	0	0%	0%	N	SNETTISHAM INLET, SPEEL, WHITING RIVERS
2824	1C	1988	13	13	0%	100%	N	HOLKHAM BAY-TRACY ARM
3001	4Z	1988	25	1028	1%	2%	Y	NAKVASINA, NEVA STRAIT AREA
3002	4Z	1988	13	592	0%	2%	Y	SITKA ROAD SYSTEM
3104	4Z	1988	13	561	0%	2%	N	NORTHERN KRUFZOF IS.
3306	4Z	1988	0	228	0%	0%	Y	FISH BAY DRAINAGES
3308	4Z	1988	50	186*	1%	27%	N	KOOK LAKE, SITKOH BAY, FALSE IS.
3309	4Z	1988	25	161	1%	16%	Y	NORTHERN SHORE HOONAH SOUND
3310	4Z	1988	19	272	0%	7%	Y	SOUTH ARM HOONAH SOUND
3312	4Z	1988	0	179	0%	0%	N	DUFFIELD PENIN., BEAR BAY
3315	4Z	1988	6	184	0%	3%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
3416	4Z	1988	19	149	0%	13%	N	KHAZ PENIN., SLOCUM ARM
3417	4Z	1988	119	267	3%	45%	N	WEST COAST CHICHAGOF
3418	4Z	1988	0	78	0%	0%	N	YAKOBI IS.
3419	4Z	1988	31	100	1%	31%	Y	UPPER LISIANSKI INLET, LISIANSKI RIVER
3420	4Z	1988	50	103	1%	49%	N	IDAHO INLET DRAINAGES
3421	4Z	1988	75	204	2%	37%	Y	PORT ALTHORP, LOWER LISIANSKI, INIAN IS.
3521	4Z	1988	44	0	1%	0%	N	LEMESURTER, PLEASANT ISLANDS
3522	4Z	1988	56	155	1%	36%	Y	PT. ADOLPHUS, MUD BAY AREA
3523	4Z	1988	44	185	1%	24%	Y	EAST SIDE PORT FREDERICK, GAME CREEK
3524	4Z	1988	125	443	3%	28%	Y	HOONAH AREA
3525	4Z	1988	182	365	5%	50%	Y	FRESHWATER BAY DRAINAGES
3531	4Z	1988	50	145	1%	34%	Y	WHITESTONE HARBOR, FALSE BAY DRAINAGES
3532	4Z	1988	38	316	1%	12%	Y	HUMPBAC, GALLAGHER CREEKS
3533	4Z	1988	0	118	0%	0%	Y	HUMPBAC, GALLAGHER CREEKS
3626	4Z	1988	157	220	4%	71%	Y	NORTH SHORE TENAKEE INLET
3627	4Z	1988	75	111	2%	68%	N	CORNER BAY, TRAP BAY
3628	4Z	1988	44	71	1%	62%	N	KADASHAN
3629	4Z	1988	150	232	4%	65%	N	SOUTHERN SHORE TENAKEE INLET
3630	4Z	1988	6	31	0%	19%	Y	UPPER TENAKEE INLET
3731	4Z	1988	25	440	1%	6%	N	KELP BAY-TAKATZ BAY

Table E-24 (Continued)

Juneau Deer Harvest by WAA and Year

WAA	GMU	YEAR	Juneau Harvest	Total WAA Harvest	Percent of Juneau Harvest	Percent of Waa Harvest	WAA Change?	WAA Location
3734	4Z	1988	6	87	0%	7%	N	SOUTHERN BARANOF IS.
3835	4Z	1988	257	287	6%	90%	N	NORTHERN MANSFIELD PENIN.
3836	4Z	1988	370	390	9%	95%	N	HAWK INLET, YOUNG BAY DRAINAGES
3837	4Z	1988	63	63	2%	100%	N	WHEELER, GREENS CREEKS DRAINAGES
3938	4Z	1988	119	317	3%	38%	N	GAMBIER BAY DRAINAGES
3939	4Z	1988	31	427	1%	7%	N	PYBUS BAY DRAINAGES
3940	4Z	1988	38	204	1%	19%	N	PT. GARDNER, ELIZA HARBOR
4042	4Z	1988	31	134	1%	23%	Y	ANGOON AREA
4043	4Z	1988	82	92	2%	89%	N	CENTRAL ADMIRALTY LAKES
4044	4Z	1988	88	111	2%	79%	Y	SHEE-ATIKA DRAINAGES
4045	4Z	1988	63	82	2%	77%	Y	FISHERY, THAYER CREEKS
4046	4Z	1988	31	116	1%	27%	Y	HOOD BAY, CHAIK BAY DRAINAGES
4145	4Z	1988	100	100	3%	100%	N	TIEDEMAN IS.-HOLE HARBOR AREA
4146	4Z	1988	119	134	3%	89%	N	WINDFALL HARBOR, SWAN COVE DRAINAGES
4147	4Z	1988	125	125	3%	100%	Y	UPPER SEYMOUR CANAL
4148	4Z	1988	100	112	3%	89%	Y	WEST SIDE GLASS PENIN.
4149	4Z	1988	132	141	3%	94%	Y	EAST SIDE GLASS PENIN.
4150	4Z	1988	389	391	10%	99%	Y	GRAND IS., OLIVER INLET, STINK CREEK
5135	3Z	1988	6	6	0%	100%	Y	NORTH SHORE KUPREANOF
Total				3998				
101	1A	1989	0	101	0%	0%	N	GRAVINA IS.
1214	2Z	1989	0	81	0%	0%	N	SKOWL ARM, POLK INLET
1316	2Z	1989	0	65	0%	0%	N	KARTA BAY
1318	2Z	1989	0	399	0%	0%	Y	CRAIG, KLAUOCK AREAS
1332	2Z	1989	5	23	0%	22%	Y	TROCADERO BAY, WATERFALL AREA
1420	2Z	1989	5	115	0%	4%	N	COFFMAN COVE, LUCK LAKE, RATZ HARBOR
1422	2Z	1989	5	375	0%	1%	Y	STANEY CREEK, NAUKATTI, SARKAR
1530	2Z	1989	0	196	0%	0%	Y	EXCHANGE COVE, WHALE PASSAGE
2305	1C	1989	5	5	0%	100%	N	SOUTHERN CHILKAT RANGE
2514	1C	1989	0	0	0%	0%	N	COMEE, DAVIES CREEKS
2515	1C	1989	0	0	0%	0%	N	EAGLE RIVER-MENDENHALL RIVER AREA
2517	1C	1989	10	10	0%	100%	N	JUNEAU AND LOWER TAKU
2519	1C	1989	0	0	0%	0%	N	TURNER LAKE, SOUTHERN SHORE TAKU INLET

Table E-24 (Continued)
Juneau Deer Harvest by WAA and Year

WAA	GMU	YEAR	Juneau Harvest	Total WAA Harvest	Percent of Juneau Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
2620	1C	1989	20	20	1%	100%	N	LINCOLN IS.
2621	1C	1989	100	104	3%	96%	N	SHELTER IS.
2722	1C	1989	296	321	8%	92%	N	DOUGLAS IS.
2823	1C	1989	0	0	0%	0%	N	SNETTISHAM INLET, SPEEL, WHITING RIVERS
2825	1C	1989	5	5	0%	100%	N	ENDICOTT ARM
3001	4Z	1989	0	553	0%	0%	Y	NAKVASINA, NEVA STRAIT AREA
3002	4Z	1989	15	638	0%	2%	Y	SITKA ROAD SYSTEM
3003	4Z	1989	10	458	0%	2%	Y	SILVER BAY, DEEP INLET
3104	4Z	1989	0	133	0%	0%	N	NORTHERN KRUFZOF IS.
3105	4Z	1989	25	78	1%	32%	N	SOUTHERN KRUFZOF IS.
3308	4Z	1989	50	187	1%	27%	N	KOOK LAKE, SITKOH BAY, FALSE IS.
3309	4Z	1989	5	195	0%	3%	Y	NORTHERN SHORE HOONAH SOUND
3310	4Z	1989	5	365	0%	1%	Y	SOUTH ARM HOONAH SOUND
3311	4Z	1989	5	306	0%	2%	Y	USHK BAY-KAKUL NARROWS
3312	4Z	1989	5	154	0%	3%	N	DUFFIELD PENIN., BEAR BAY
3313	4Z	1989	25	187	1%	13%	N	ROOMAN AND SAKOK BAY DRAINAGES
3315	4Z	1989	5	216	0%	2%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
3417	4Z	1989	55	248	1%	22%	N	WEST COAST CHICHAGOF
3418	4Z	1989	40	91	1%	44%	N	YAKOBI IS.
3419	4Z	1989	5	102	0%	5%	Y	UPPER LISIANSKI INLET, LISIANSKI RIVER
3420	4Z	1989	60	99	2%	61%	N	IDAHO INLET DRAINAGES
3421	4Z	1989	20	109	1%	18%	Y	PORT ALTHORP, LOWER LISIANSKI, INIAN IS.
3523	4Z	1989	10	156	0%	6%	Y	EAST SIDE PORT FREDERICK, GAME CREEK
3524	4Z	1989	65	289	2%	22%	Y	HOONAH AREA
3525	4Z	1989	160	289	4%	55%	Y	FRESHWATER BAY DRAINAGES
3526	4Z	1989	196	286	5%	69%	Y	NORTH SHORE TENAKEE INLET
3551	4Z	1989	75	307	2%	24%	Y	WHITESTONE HARBOR, FALSE BAY DRAINAGES
3627	4Z	1989	65	95	2%	68%	N	CORNER BAY, TRAP BAY
3628	4Z	1989	10	10	0%	100%	N	KADASHAN
3629	4Z	1989	110	174	3%	63%	N	SOUTHERN SHORE TENAKEE INLET
3630	4Z	1989	15	40	0%	38%	Y	UPPER TENAKEE INLET
3731	4Z	1989	5	107	0%	5%	N	KELP BAY-TAKATZ BAY
3732	4Z	1989	20	68	1%	29%	N	WARM SPRINGS COAST
3734	4Z	1989	35	152	1%	23%	N	SOUTHERN BARANOF IS.
3835	4Z	1989	211	227	6%	93%	N	NORTHERN MANSFIELD PENIN.

Table E-24 (Continued)
Juneau Deer Harvest by WAA and Year

WAA	GMU	YEAR	Juneau Harvest	Total		Percent of Juneau Harvest	Percent of Waa Harvest	WAA Change?	WAA Location
				WAA Harvest	Harvest				
3836	42	1989	286	334	8%	86%	N		HAWK INLET, YOUNG BAY DRAINAGES
3837	42	1989	85	114	2%	75%	N		WHEELER, GREENS CREEKS DRAINAGES
3938	42	1989	110	238	3%	46%	N		GAMBIER BAY DRAINAGES
3939	42	1989	45	346	1%	13%	N		PYBUS BAY DRAINAGES
3940	42	1989	10	157	0%	6%	N		PT. GARDNER, ELIZA HARBOR
4041	42	1989	15	43	0%	35%	Y		WHITEWATER BAY, WILSON COVE
4042	42	1989	10	79	0%	13%	Y		ANGOON AREA
4043	42	1989	25	42	1%	60%	N		CENTRAL ADMIRALTY LAKES
4044	42	1989	110	199	3%	55%	Y		SHEE-ATIKA DRAINAGES
4054	42	1989	5	12	0%	42%	Y		FISHERY, THAYER CREEKS
4055	42	1989	15	75	0%	20%	Y		HOOD BAY, CHAIK BAY DRAINAGES
4145	42	1989	160	188	4%	85%	N		TIEDEMAN IS.-HOLE HARBOR AREA
4146	42	1989	75	75	2%	100%	N		WINDFALL HARBOR, SWAN COVE DRAINAGES
4147	42	1989	170	170	5%	100%	Y		UPPER SEYMOUR CANAL
4148	42	1989	241	264	6%	91%	Y		WEST SIDE GLASS PENIN.
4149	42	1989	165	206	4%	80%	Y		EAST SIDE GLASS PENIN
4150	42	1989	281	291	7%	97%	Y		GRAND IS., OLIVER INLET, STINK CREEK
4222	42	1989	65	257	2%	25%	Y		PT. ADOLPHUS, MUD BAY AREA
4252	42	1989	60	373	2%	16%	Y		HUMPBAC, GALLABHER CREEKS
4253	42	1989	35	200	1%	18%	Y		NEKA BAY DRAINAGES
4256	42	1989	25	105	1%	24%	N		LEMESURIER, PLEASANT ISLANDS
4302	10	1989	10	10	0%	100%	N		LOWER CHILKAT, KELSALL RIVER VALLEYS
				Total	3761				
202	1A	1990	6	18	0%	33%	N		ANNETTE IS.
509	1A	1990	0	49	0%	0%	Y		NAHA AREA
1106	2Z	1990	6	127	0%	5%	N		LONG IS.
1317	2Z	1990	11	79	0%	14%	N		TWELVE MILE ARM, HARRIS RIVER
1318	2Z	1990	0	429	0%	0%	Y		CRAIG, KLANOCK AREAS
1319	2Z	1990	0	426	0%	0%	N		THORNE RIVER DRAINAGE
1420	2Z	1990	6	144	0%	4%	N		COFFMAN COVE, LUCK LAKE, RATZ HARBOR
1422	2Z	1990	0	307	0%	0%	Y		STANLEY CREEK, NAUKATTI, SARKAR
1528	2Z	1990	0	33	0%	0%	N		SALMON BAY
1529	2Z	1990	0	307	0%	0%	N		MT. CALDER, RED BAY, PORT PROTECTION

Table E-24 (Continued)
Juneau Deer Harvest by WAA and Year

WAA	GMU	YEAR	Juneau Harvest	Total WAA Harvest	Percent of Juneau Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
2413	1C	1990	0	0	0%	0%	N	GILKEY RIVER DRAINAGE
2514	1C	1990	0	0	0%	0%	N	COWEE, DAVIES CREEKS
2515	1C	1990	0	0	0%	0%	N	EAGLE RIVER-MENDENHALL RIVER AREA
2517	1C	1990	28	40	1%	70%	N	JUNEAU AND LOWER TAKU
2620	1C	1990	11	11	0%	100%	N	LINCOLN IS.
2621	1C	1990	51	51	1%	100%	N	SHELTER IS.
2722	1C	1990	324	326	8%	99%	N	DOUGLAS IS.
2824	1C	1990	6	6	0%	100%	N	HOLKHAM BAY-TRACY ARM
3001	4Z	1990	11	783	0%	1%	Y	NAKVASINA, NEVA STRAIT AREA
3002	4Z	1990	11	585	0%	2%	Y	SITKA ROAD SYSTEM
3003	4Z	1990	17	319	0%	5%	Y	SILVER BAY, DEEP INLET
3104	4Z	1990	34	236	1%	14%	N	NORTHERN KRUIZOF IS.
3308	4Z	1990	62	160	1%	39%	N	KOOK LAKE, SITKOH BAY, FALSE IS.
3309	4Z	1990	74	371	2%	20%	Y	NORTHERN SHORE HOONAH SOUND
3310	4Z	1990	40	370	1%	11%	Y	SOUTH ARM HOONAH SOUND
3312	4Z	1990	6	205	0%	3%	N	DUFFIELD PENIN., BEAR BAY
3313	4Z	1990	0	137	0%	0%	N	RODMAN AND SAKOK BAY DRAINAGES
3314	4Z	1990	23	230	1%	10%	Y	FISH BAY DRAINAGES
3315	4Z	1990	40	274	1%	15%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
3417	4Z	1990	142	240	3%	59%	N	WEST COAST CHICHAGOF
3418	4Z	1990	0	101	0%	0%	N	YAKOBI IS.
3419	4Z	1990	17	126	0%	13%	Y	UPPER LISIANSKI INLET, LISIANSKI RIVER
3420	4Z	1990	62	81	1%	77%	N	IDAHO INLET DRAINAGES
3421	4Z	1990	0	64	0%	0%	Y	PORT ALTHORP, LOWER LISIANSKI, INIAN IS.
3523	4Z	1990	23	242	1%	10%	Y	EAST SIDE PORT FREDERICK, GAME CREEK
3524	4Z	1990	34	220	1%	15%	Y	HOONAH AREA
3525	4Z	1990	125	316	3%	40%	Y	FRESHWATER BAY DRAINAGES
3526	4Z	1990	290	355	7%	82%	Y	NORTH SHORE TENAKEE INLET
3551	4Z	1990	97	263	2%	37%	Y	WHITESTONE HARBOR, FALSE BAY DRAINAGES
3627	4Z	1990	40	76	1%	53%	N	CORNER BAY, TRAP BAY
3628	4Z	1990	23	33	1%	70%	N	KADASHAN
3629	4Z	1990	68	127	2%	54%	N	SOUTHERN SHORE TENAKEE INLET
3630	4Z	1990	6	39	0%	15%	Y	UPPER TENAKEE INLET
3734	4Z	1990	6	188	0%	3%	N	SOUTHERN BARANOF IS.
3835	4Z	1990	330	339	8%	97%	N	NORTHERN MANSFIELD PENIN.

Table E-24 (Continued)

Juneau Deer Harvest by WAA and Year

WAA	GMU	YEAR	Juneau Harvest	Total WAA Harvest	Percent of Juneau Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
3836	42	1990	267	297	6%	90%	N	HAWK INLET, YOUNG BAY DRAINAGES
3837	42	1990	97	102	2%	95%	N	WHEELER, GREENS CREEKS DRAINAGES
3938	42	1990	205	445	5%	46%	N	GAMBIER BAY DRAINAGES
3939	42	1990	68	420	2%	16%	N	PYBUS BAY DRAINAGES
4041	42	1990	11	64	0%	17%	Y	WHITEWATER BAY, WILSON COVE
4042	42	1990	6	80	0%	8%	Y	ANGOON AREA
4043	42	1990	34	43	1%	79%	N	CENTRAL ADMIRALTY LAKES
4044	42	1990	176	294	4%	60%	Y	SHEE-ATIKA DRAINAGES
4055	42	1990	57	183	1%	31%	Y	HOOD BAY, CHAIK BAY DRAINAGES
4145	42	1990	222	249	5%	89%	N	TIEDEMAN IS.-MOLE HARBOR AREA
4146	42	1990	102	120	2%	85%	N	WINDFALL HARBOR, SWAN COVE DRAINAGES
4147	42	1990	148	195	4%	76%	Y	UPPER SEYMOUR CANAL
4148	42	1990	114	166	3%	69%	Y	WEST SIDE GLASS PENIN.
4149	42	1990	187	200	4%	94%	Y	EAST SIDE GLASS PENIN
4150	42	1990	227	281	5%	81%	Y	GRAND IS., OLIVER INLET, STINK CREEK
4222	42	1990	159	490	4%	32%	Y	PT. ADOLPHUS, MUD BAY AREA
4252	42	1990	57	267	1%	21%	Y	HUMPBAC, GALLABHER CREEKS
4253	42	1990	17	166	0%	10%	Y	NEKA BAY DRAINAGES
4256	42	1990	23	97	1%	24%	N	LEMESURIER, PLEASANT ISLANDS
5138	32	1990	6	6	0%	100%	Y	SOUTHERN LINDENBERG PENIN.

Total 4213

Note: Some WAA boundaries and/or numbers have changed since 1987.
Source: ADF&G, Division of Wildlife Conservation harvest records.

Table E-25
Kake Deer Harvest by WAA and Year

WAA	GMU	YEAR	Kake Harvest	Total WAA Harvest	Percent of Kake Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
3938	4Z	1987	13	264	8%	5%	N	GAMBIER BAY DRAINAGES
3939	4Z	1987	88	405	54%	22%	N	PYBUS BAY DRAINAGES
3940	4Z	1987	50	225	30%	22%	N	PT. GARDNER, ELIZA HARBOR
4041	4Z	1987	13	282	8%	5%	Y	WHITEWATER BAY, WILSON COVE
Total			164					
3315	4Z	1988	8	184	3%	4%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
3731	4Z	1988	31	440	11%	7%	N	KELP BAY-TAKATZ BAY
3938	4Z	1988	31	317	11%	10%	N	GAMBIER BAY DRAINAGES
3939	4Z	1988	46	427	16%	11%	N	PYBUS BAY DRAINAGES
3940	4Z	1988	145	204	50%	71%	N	PT. GARDNER, ELIZA HARBOR
4041	4Z	1988	27	27	9%	100%	Y	WHITEWATER BAY, WILSON COVE
Total			288					
1107	2Z	1989	0	49	0%	0%	N	HYDABURG, HETTA INLET, SUKKWAN IS.
1906	3Z	1989	6	37	4%	16%	N	KASHEVAROF ISLANDS
2926	1C	1989	0	9	0%	0%	N	WINDHAM BAY, CHUCK RIVER, HOBART BAY
3001	4Z	1989	3	553	2%	1%	Y	NAKVASINA, NEVA STRAIT AREA
3311	4Z	1989	11	306	7%	4%	Y	USHK BAY-KAKUL NARROWS
3314	4Z	1989	3	135	2%	2%	Y	FISH BAY DRAINAGES
3731	4Z	1989	0	107	0%	0%	N	KELP BAY-TAKATZ BAY
3733	4Z	1989	0	122	0%	0%	N	WHALE BAY DRAINAGES, WILDERNESS COAST
3938	4Z	1989	20	238	14%	8%	N	GAMBIER BAY DRAINAGES
3939	4Z	1989	72	346	49%	21%	N	PYBUS BAY DRAINAGES
3940	4Z	1989	26	157	18%	17%	N	PT. GARDNER, ELIZA HARBOR
4041	4Z	1989	0	43	0%	0%	Y	WHITEWATER BAY, WILSON COVE
4252	4Z	1989	3	373	2%	1%	Y	HUMPBAC, GALLAGHER CREEKS
4253	4Z	1989	3	200	2%	2%	Y	NEKA BAY DRAINAGES
Total			147					

Table E-25 (Continued)

Kake Deer Harvest by WAA and Year

WAA	GMU	YEAR	Kake Harvest	Total WAA Harvest	Percent of Kake Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
3206	42	1990	15	122	6%	12%	N	REDOUBT LAKE, NECKAR ISLANDS
3731	42	1990	4	154	2%	3%	N	KELP BAY-TAKATZ BAY
3733	42	1990	8	126	3%	6%	N	WHALE BAY DRAINAGES, WILDERNESS COAST
3734	42	1990	11	188	4%	6%	N	SOUTHERN BARANOF IS.
3938	42	1990	19	445	7%	4%	N	GAMBIER BAY DRAINAGES
3939	42	1990	15	420	6%	4%	N	PYBUS BAY DRAINAGES
3940	42	1990	169	557	64%	30%	N	PT. GARDNER, ELIZA HARBOR
4041	42	1990	23	64	9%	36%	Y	WHITEWATER BAY, WILSON COVE
4043	42	1990	0	43	0%	0%	N	CENTRAL ADMIRALTY LAKES
Total			264					

Note: Some WAA boundaries and/or numbers have changed since 1987.

Source: ADF&G, Division of Wildlife Conservation harvest records.

Table E-26

Ketchikan Deer Harvest by WAA and Year

WAA	GMU	YEAR	Ketchikan Harvest	Total WAA Harvest	Percent Ketchikan Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
101	1A	1987	71	71	4%	100%	N	GRAVINA IS.
404	1A	1987	29	35	1%	83%	N	EASTERN REVILLA IS.
405	1A	1987	6	12	0%	50%	N	THORNE ARM, REVILLA IS.
406	1A	1987	53	71	3%	75%	N	CARROL INLET
407	1A	1987	76	76	4%	100%	N	GEORGE INLET
408	1A	1987	0	0	0%	0%	N	KETCHIKAN
509	1A	1987	65	66	3%	98%	Y	MAHA AREA
510	1A	1987	6	7	0%	86%	Y	NEETS BAY AREA
612	1A	1987	71	71	4%	100%	N	EASTERN CLEVELAND PENIN.
613	1A	1987	135	146	7%	92%	N	HELM BAY
614	1A	1987	6	8	0%	75%	N	MEYERS CHUCK
715	1A	1987	12	13	1%	92%	N	REFLECTION, EAGLE LAKES
821	1A	1987	12	13	1%	92%	N	SMEATON BAY
823	1A	1987	6	6	0%	100%	N	PEARSE CANAL
1003	2Z	1987	41	93	2%	44%	N	HECETA IS.
1105	2Z	1987	0	3	0%	0%	N	DALL IS.
1106	2Z	1987	12	45	1%	27%	N	LONG IS.
1107	2Z	1987	18	43	1%	42%	N	HYDABURG, HETTA INLET, SUKKWAN IS.
1108	2Z	1987	6	6	0%	100%	N	SOUTHWESTERN PRINCE OF WALES IS.
1210	2Z	1987	35	35	2%	100%	N	MOIRA SOUND
1211	2Z	1987	35	58	2%	60%	N	KITKUN, SOUTH ARM CHOLMONDELEY
1212	2Z	1987	18	31	1%	58%	Y	CLOVER MTN.
1213	2Z	1987	0	2	0%	0%	Y	WEST ARM CHOLMONDELEY
1214	2Z	1987	47	0	2%	0%	N	SKOWL ARM, POLK INLET
1315	2Z	1987	82	235	4%	35%	N	KASAAN PENINSULA, THORNE BAY
1316	2Z	1987	18	140	1%	13%	N	KARTA BAY
1317	2Z	1987	35	122	2%	29%	N	TWELVE MILE ARM, HARRIS RIVER
1318	2Z	1987	47	494	2%	10%	Y	CRAIG, KLAUOCK AREAS
1319	2Z	1987	35	285	2%	12%	N	THORNE RIVER DRAINAGE
1420	2Z	1987	53	220	3%	24%	N	COFFMAN COVE, LUCK LAKE, RATZ HARBOR
1421	2Z	1987	247	539	12%	46%	N	SWEETWATER LAKE, LOGJAM CREEK
1422	2Z	1987	200	495	10%	40%	Y	STANLEY CREEK, NAUKATI, SARKAR
1525	2Z	1987	6	12	0%	50%	N	SOUTHERN KOSCIUSKO IS.

Table E-26 (Continued)
Ketchikan Deer Harvest by WAA and Year

WAA	GNU	YEAR	Ketchikan Harvest	Total WAA Harvest	Percent Ketchikan Harvest	Percent of Waa Harvest	WAA Change?	WAA Location
1526	2Z	1987	12	67	1%	18%	Y	TUXEKAN, MARBLE, SEA OTTER SOUND
1527	2Z	1987	176	416	9%	42%	Y	EXCHANGE COVE, WHALE PASSAGE
1528	2Z	1987	29	72	1%	40%	N	SALMON BAY
1529	2Z	1987	65	295	3%	22%	N	MT. CALDER, RED BAY, PORT PROTECTION
1817	1B	1987	29	31	1%	94%	N	VIXEN INLET, UNION BAY
1901	3Z	1987	0	19	0%	0%	Y	NORTHERN ETOLIN IS.
2514	1C	1987	0	0	0%	0%	N	COMEE, DAVIES CREEKS
2722	1C	1987	0	380	0%	0%	N	DOUGLAS IS.
2926	1C	1987	0	1	0%	0%	N	WINDHAM BAY, CHUCK RIVER, HOBART BAY
3001	4Z	1987	41	1248	2%	3%	Y	NAKVASINA, NEVA STRAIT AREA
3002	4Z	1987	0	437	0%	0%	Y	SITKA ROAD SYSTEM
3308	4Z	1987	6	361	0%	2%	N	KOOK LAKE, SITKOH BAY, FALSE IS.
3313	4Z	1987	24	217	1%	11%	N	RODMAN AND SAOK BAY DRAINAGES
3315	4Z	1987	63	218	3%	29%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
3523	4Z	1987	12	1066	1%	1%	Y	HOONAH AREA
3625	4Z	1987	6	535	0%	1%	Y	WHITESTONE HARBOR, FALSE BAY DRAINAGES
3732	4Z	1987	0	20	0%	0%	N	WARM SPRINGS COAST
3835	4Z	1987	29	435	1%	7%	N	NORTHERN MANSFIELD PENIN.
4043	4Z	1987	18	0	1%	0%	N	CENTRAL ADMIRALTY LAKES
4147	4Z	1987	6	595	0%	1%	Y	UPPER SEYMOUR CANAL
9999	NA	1987	6	216	0%	3%	Y	NA
Total			2005					
101	1A	1988	130	135	8%	96%	N	GRAVINA IS.
404	1A	1988	13	13	1%	100%	N	EASTERN REVILLA IS.
405	1A	1988	26	26	2%	100%	N	THORNE ARM, REVILLA IS.
406	1A	1988	104	104	6%	100%	N	CARROL INLET
407	1A	1988	104	104	6%	100%	N	GEORGE INLET
408	1A	1988	72	72	4%	100%	N	KETCHIKAN
509	1A	1988	59	59	4%	100%	Y	NANA AREA
510	1A	1988	0	0	0%	0%	Y	NEETS BAY AREA
612	1A	1988	46	62	3%	74%	N	EASTERN CLEVELAND PENIN.

Table E-26 (Continued)

Ketchikan Deer Harvest by WAA and Year

WAA	GMU	YEAR	Ketchikan Harvest	Total WAA Harvest	Percent Ketchikan Harvest	Percent of Waa Harvest	WAA Change?	WAA Location
613	1A	1988	59	62	4%	95%	N	HELM BAY
715	1A	1988	0	0	0%	0%	N	REFLECTION, EAGLE LAKES
719	1A	1988	0	0	0%	0%	N	RUDYERD BAY
820	1A	1988	0	0	0%	0%	N	WILSON, BLOSSOM RIVERS DRAINAGES
823	1A	1988	0	0	0%	0%	N	PEARSE CANAL
1003	2Z	1988	65	126	4%	52%	N	HECETA IS.
1106	2Z	1988	20	38	1%	53%	N	LONG IS.
1107	2Z	1988	13	49	1%	27%	N	HYDABURG, HETTA INLET, SUKKHAN IS.
1108	2Z	1988	0	0	0%	0%	N	SOUTHWESTERN PRINCE OF WALES IS.
1209	2Z	1988	0	0	0%	0%	N	SOUTHEASTERN PRINCE OF WALES IS.
1210	2Z	1988	13	13	1%	100%	N	MOIRA SOUND
1211	2Z	1988	59	79	4%	75%	N	KITKUN, SOUTH ARM CHOLMONDELEY
1212	2Z	1988	20	20	1%	100%	Y	CLOVER MTN.
1213	2Z	1988	0	0	0%	0%	Y	WEST ARM CHOLMONDELEY
1214	2Z	1988	46	93	3%	49%	N	SKOWL ARM, POLK INLET
1315	2Z	1988	33	130	2%	25%	N	KASAAN PENINSULA, THORNE BAY
1316	2Z	1988	46	77	3%	60%	N	KARTA BAY
1317	2Z	1988	0	28	0%	0%	N	TWELVE MILE ARM, HARRIS RIVER
1318	2Z	1988	39	346	2%	11%	Y	CRAIG, KLAUOCK AREAS
1319	2Z	1988	39	242	2%	16%	N	THORNE RIVER DRAINAGE
1321	2Z	1988	7	76	0%	9%	Y	WESTERN PRINCE OF WALES IS.
1420	2Z	1988	104	185	6%	56%	N	COFFMAN COVE, LUCK LAKE, RATZ HARBOR
1421	2Z	1988	169	329	10%	51%	N	SWEETWATER LAKE, LOGJAM CREEK
1422	2Z	1988	98	286	6%	34%	Y	STANEY CREEK, NAUKATI, SARKAR
1526	2Z	1988	20	115	1%	17%	Y	HOLBROOK MT., NORTHERN KOSCIUSKO IS.
1527	2Z	1988	0	43	0%	0%	Y	PRINCE OF WALES EL CAPITAN AREA
1528	2Z	1988	0	63	0%	0%	N	SALMON BAY
1529	2Z	1988	0	146	0%	0%	N	MT. CALDER, RED BAY, PORT PROTECTION
1530	2Z	1988	91	201	6%	45%	Y	EXCHANGE COVE, WHALE PASSAGE
1817	1B	1988	20	25	1%	80%	N	VIXEN INLET, UNION BAY
1901	3Z	1988	0	0	0%	0%	Y	NORTHERN ETOLIN IS.
1906	3Z	1988	0	37	0%	0%	N	KASHEVAROF ISLANDS
3001	4Z	1988	20	1028	1%	2%	Y	NAKWASINA, NEVA STRAIT AREA

Table E-26 (Continued)

Ketchikan Deer Harvest by WAA and Year

WAA	GMU	YEAR	Ketchikan Harvest	Total WAA Harvest	Percent Ketchikan Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
3002	42	1988	0	592	0%	0%	Y	SITKA ROAD SYSTEM
3104	42	1988	7	561	0%	1%	N	NORTHERN KRUFZOF IS.
3306	42	1988	0	228	0%	0%	Y	FISH BAY DRAINAGES
3311	42	1988	13	330	1%	4%	Y	USHK BAY-KAKUL NARROWS
3315	42	1988	39	184	2%	21%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
3418	42	1988	13	78	1%	17%	N	YAKOBI IS.
3522	42	1988	0	155	0%	0%	Y	PT. ADOLPHUS, MUD BAY AREA
3524	42	1988	7	443	0%	2%	Y	HOONAH AREA
3731	42	1988	13	440	1%	3%	N	KELP BAY-TAKATZ BAY
3938	42	1988	13	317	1%	4%	N	GAMBIER BAY DRAINAGES
3939	42	1988	0	427	0%	0%	N	PYBUS BAY DRAINAGES
Total				1640				
101	1A	1989	101	101	6%	100%	N	GRAVINA IS.
202	1A	1989	10	32	1%	31%	N	ANNETTE IS.
202	1A	1989	10	32	1%	31%	N	ANNETTE IS.
202	1A	1989	10	32	1%	31%	N	ANNETTE IS.
202	1A	1989	10	32	1%	31%	N	ANNETTE IS.
303	1A	1989	0	0	0%	0%	N	DUKE IS.
404	1A	1989	0	0	0%	0%	N	EASTERN REVILLA IS.
405	1A	1989	15	15	1%	100%	N	THORNE ARM, REVILLA IS.
406	1A	1989	20	39	1%	51%	N	CARROL INLET
407	1A	1989	46	46	3%	100%	N	GEORGE INLET
408	1A	1989	46	58	3%	79%	N	KETCHIKAN
509	1A	1989	56	56	4%	100%	Y	NAHA AREA
510	1A	1989	25	56	2%	45%	Y	NEETS BAY AREA
612	1A	1989	76	76	5%	100%	N	EASTERN CLEVELAND PENIN.
613	1A	1989	91	91	6%	100%	N	HELM BAY
614	1A	1989	10	17	1%	59%	N	MEYERS CHUCK
715	1A	1989	0	5	0%	0%	N	REFLECTION, EAGLE LAKES
716	1A	1989	0	0	0%	0%	N	UNUK DRAINAGE
719	1A	1989	0	0	0%	0%	N	RUDYERD BAY

Table E-26 (Continued)
Ketchikan Deer Harvest by WAA and Year

WAA	GMU	YEAR	Ketchikan Harvest	Total WAA Harvest	Percent Ketchikan Harvest	Percent of Waa Harvest	WAA Change?	WAA Location
821	1A	1989	0	1	0%	0%	N	SMEATON BAY
822	1A	1989	0	0	0%	0%	N	BOCA DE QUADRA DRAINAGES
901	2Z	1989	5	18	0%	28%	N	SUEMEZ IS.
1003	2Z	1989	35	128	2%	27%	N	HECETA IS.
1105	2Z	1989	5	5	0%	100%	N	DALL IS.
1106	2Z	1989	0	34	0%	0%	N	LONG IS.
1107	2Z	1989	25	49	2%	51%	N	HYDABURG, HETTA INLET, SUKKWAN IS.
1108	2Z	1989	0	6	0%	0%	N	SOUTHWESTERN PRINCE OF WALES IS.
1210	2Z	1989	20	20	1%	100%	N	MOIRA SOUND
1211	2Z	1989	116	132	7%	88%	N	KITKUN, SOUTH ARM CHOLMONDELEY
1212	2Z	1989	46	46	3%	100%	Y	CLOVER MTN.
1213	2Z	1989	10	10	1%	100%	Y	WEST ARM CHOLMONDELEY
1214	2Z	1989	51	81	3%	63%	N	SKOWL ARM, POLK INLET
1315	2Z	1989	25	92	2%	27%	N	KASAAN PENINSULA, THORNE BAY
1316	2Z	1989	30	65	2%	46%	N	KARTA BAY
1317	2Z	1989	10	74	1%	14%	N	TWELVE MILE ARM, HARRIS RIVER
1318	2Z	1989	51	399	3%	13%	Y	CRAIG, KLAHOCK AREAS
1319	2Z	1989	35	195	2%	18%	N	THORNE RIVER DRAINAGE
1323	2Z	1989	25	93	2%	27%	Y	WESTERN PRINCE OF WALES IS.
1420	2Z	1989	71	115	5%	62%	N	COFFMAN COVE, LUCK LAKE, RATZ HARBOR
1421	2Z	1989	101	224	6%	45%	N	SWEETWATER LAKE, LOGJAM CREEK
1422	2Z	1989	116	375	7%	31%	Y	STANEY CREEK, NAUKATI, SARKAR
1525	2Z	1989	5	24	0%	21%	N	SOUTHERN KOSCIUSKO IS.
1526	2Z	1989	25	110	2%	23%	Y	HOLBROOK MT., NORTHERN KOSCIUSKO IS.
1529	2Z	1989	20	157	1%	13%	N	MT. CALDER, RED BAY, PORT PROTECTION
1530	2Z	1989	51	196	3%	26%	Y	EXCHANGE COVE, WHALE PASSAGE
1531	2Z	1989	0	45	0%	0%	Y	TUXEKAN, MARBLE, SEA OTTER SOUND
1707	1B	1989	5	5	0%	100%	N	NORTH ARM OF THE STIKINE
1816	1B	1989	0	0	0%	0%	N	SEWARD PASSAGE
1817	1B	1989	10	13	1%	77%	N	VIXEN INLET, UNION BAY
1901	3Z	1989	15	15	1%	100%	Y	NORTHERN ETOLIN IS.
1903	3Z	1989	0	15	0%	0%	N	WRANGELL IS.
2722	1C	1989	20	321	1%	6%	N	DOUGLAS IS.

Table E-26 (Continued)

Ketchikan Deer Harvest by WAA and Year

WAA	GHU	YEAR	Ketchikan Harvest	Total WAA Harvest	Percent Ketchikan Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
3002	4Z	1989	20	638	1%	3%	Y	SITKA ROAD SYSTEM
3003	4Z	1989	0	458	0%	0%	Y	SILVER BAY, DEEP INLET
3308	4Z	1989	20	187	1%	11%	N	KOOK LAKE, SITKOH BAY, FALSE IS.
3313	4Z	1989	10	187	1%	5%	N	RODMAN AND SAOOK BAY DRAINAGES
3314	4Z	1989	10	135	1%	7%	Y	FISH BAY DRAINAGES
3315	4Z	1989	0	216	0%	0%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
3629	4Z	1989	10	174	1%	6%	N	SOUTHERN SHORE TENAKEE INLET
3731	4Z	1989	15	107	1%	14%	N	KELP BAY-TAKATZ BAY
3734	4Z	1989	0	152	0%	0%	N	SOUTHERN BARANOF IS.
3835	4Z	1989	5	227	0%	2%	N	NORTHERN MANSFIELD PENIN.
3836	4Z	1989	5	334	0%	1%	N	HAWK INLET, YOUNG BAY DRAINAGES
3940	4Z	1989	0	157	0%	0%	N	PT. GARDNER, ELIZA HARBOR
4043	4Z	1989	10	42	1%	24%	N	CENTRAL ADMIRALTY LAKES
4145	4Z	1989	10	188	1%	5%	N	TIEDEMAN IS.-HOLE HARBOR AREA
4222	4Z	1989	5	257	0%	2%	Y	PT ADOLPHUS, MUD BAY AREA
Total			1574					
101	1A	1990	99	101	6%	98%	N	GRAVINA IS.
303	1A	1990	0	2	0%	0%	N	DUKE IS.
404	1A	1990	14	14	1%	100%	N	EASTERN REVILLA IS.
405	1A	1990	21	21	1%	100%	N	THORNE ARM, REVILLA IS.
406	1A	1990	71	71	4%	100%	N	CARROL INLET
407	1A	1990	85	85	5%	100%	N	GEORGE INLET
408	1A	1990	49	68	3%	72%	N	KETCHIKAN
509	1A	1990	49	49	3%	100%	Y	NAHA AREA
510	1A	1990	49	53	3%	92%	Y	NEETS BAY AREA
612	1A	1990	35	35	2%	100%	N	EASTERN CLEVELAND PENIN.
613	1A	1990	183	183	11%	100%	N	HELM BAY
614	1A	1990	14	17	1%	82%	N	MEYERS CHUCK
715	1A	1990	0	4	0%	0%	N	REFLECTION, EAGLE LAKES
901	2Z	1990	7	19	0%	37%	N	SUEMEZ IS.
902	2Z	1990	7	28	0%	25%	N	OUTSIDE ISLANDS

Table E-26 (Continued)

Ketchikan Deer Harvest by WAA and Year

WAA	GMU	YEAR	Ketchikan Harvest	Total WAA Harvest	Percent Ketchikan Harvest	Percent of Waa Harvest	WAA Change?	WAA Location
1003	22	1990	28	82	2%	34%	N	HECETA IS.
1105	22	1990	0	6	0%	0%	N	DALL IS.
1106	22	1990	85	127	5%	67%	N	LONG IS.
1107	22	1990	0	12	0%	0%	N	HYDABURG, HETTA INLET, SUKKWAN IS.
1108	22	1990	21	21	1%	100%	N	SOUTHWESTERN PRINCE OF WALES IS.
1210	22	1990	0	27	0%	0%	N	MOIRA SOUND
1211	22	1990	35	44	2%	80%	N	KITKUN, SOUTH ARM CHOLMONDELEY
1212	22	1990	7	7	0%	100%	Y	CLOVER MTN.
1213	22	1990	28	31	2%	90%	Y	WEST ARM CHOLMONDELEY
1214	22	1990	71	100	4%	71%	N	SKOWL ARM, POLK INLET
1315	22	1990	21	144	1%	15%	N	KASAAAN PENINSULA, THORNE BAY
1316	22	1990	0	31	0%	0%	N	KARTA BAY
1317	22	1990	21	79	1%	27%	N	TWELVE MILE ARM, HARRIS RIVER
1318	22	1990	7	429	0%	2%	Y	CRAIG, KLAHOCK AREAS
1319	22	1990	28	426	2%	7%	N	THORNE RIVER DRAINAGE
1323	22	1990	21	101	1%	21%	Y	WESTERN PRINCE OF WALES IS.
1332	22	1990	7	62	0%	11%	Y	TROCADERO BAY, WATERFALL AREA
1420	22	1990	42	144	2%	29%	N	COFFMAN COVE, LUCK LAKE, RATZ HARBOR
1421	22	1990	49	118	3%	42%	N	SWEETWATER LAKE, LOGJAM CREEK
1422	22	1990	120	307	7%	39%	Y	STANEY CREEK, NAUKATI, SARKAR
1527	22	1990	7	27	0%	26%	Y	PRINCE OF WALES EL CAPITAN AREA
1528	22	1990	7	33	0%	21%	N	SALMON BAY
1529	22	1990	127	307	7%	41%	N	MT. CALDER, RED BAY, PORT PROTECTION
1530	22	1990	71	215	4%	33%	Y	EXCHANGE COVE, WHALE PASSAGE
1531	22	1990	7	52	0%	13%	Y	TUXEKAN, MARBLE, SEA OTTER SOUND
1817	18	1990	14	14	1%	100%	N	VIXEN INLET, UNION BAY
1901	32	1990	7	23	0%	30%	Y	NORTHERN ETOLIN IS.
1906	32	1990	0	18	0%	0%	N	KASHEVAROF ISLANDS
1910	32	1990	14	30	1%	47%	Y	SOUTHERN ETOLIN IS.
3001	42	1990	0	783	0%	0%	Y	NAKWASINA, NEVA STRAIT AREA
3002	42	1990	7	585	0%	1%	Y	SITKA ROAD SYSTEM
3308	42	1990	21	160	1%	13%	N	KOOK LAKE, SITKOH BAY, FALSE IS.
3315	42	1990	49	274	3%	18%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY

Table E-26 (Continued)
Ketchikan Deer Harvest by WAA and Year

WAA	GMU	YEAR	Ketchikan Harvest	Total WAA Harvest	Percent Ketchikan Harvest	Percent of Waa Harvest	WAA Change?	WAA Location
3525	42	1990	21	316	1%	7%	Y	FRESHWATER BAY DRAINAGES
3627	42	1990	14	76	1%	18%	N	CORNER BAY, TRAP BAY
3630	42	1990	7	39	0%	18%	Y	UPPER TENAKEE INLET
3731	42	1990	14	154	1%	9%	N	KELP BAY-TAKATZ BAY
3938	42	1990	7	445	0%	2%	N	GAMBIER BAY DRAINAGES
3940	42	1990	42	557	2%	8%	N	PT. GARDNER, ELIZA HARBOR
4043	42	1990	7	43	0%	16%	N	CENTRAL ADMIRALTY LAKES
4150	42	1990	21	281	1%	7%	Y	GRAND IS., OLIVER INLET, STINK CREEK
Total			1738					

Note: Some WAA boundaries and/or numbers have changed since 1987.
Source: ADF&G, Division of Wildlife Conservation harvest records.

Table E-27

Meyers Chuck Deer Harvest by WAA and Year

WAA	GMU	YEAR	Meyers Chuck Harvest	Total WAA Harvest	Percent of My. Ch. Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
613	1A	1987	11	146	52%	8%	N	HELM BAY
614	1A	1987	2	8	10%	25%	N	MEYERS CHUCK
1316	2Z	1987	2	140	10%	1%	N	KARTA BAY
1420	2Z	1987	2	220	10%	1%	N	COFFMAN COVE, LUCK LAKE, RATZ HARBOR
1422	2Z	1987	2	495	10%	0%	Y	STANLEY CREEK, NAUKATI, SARKAR
1817	1B	1987	2	31	10%	6%	N	VIXEN INLET, UNION BAY
3001	4Z	1987	0	1248	0%	0%	Y	NAKUASINA, NEVA STRAIT
3002	4Z	1987	0	437	0%	0%	Y	SITKA ROAD SYSTEM
9999	NA	1987	2	NA	10%	NA	NA	NA
Total			21					
613	1A	1988	3	62	17%	5%	N	HELM BAY
614	1A	1988	10	10	56%	100%	N	MEYERS CHUCK
1319	2Z	1988	0	242	0%	0%	N	THORNE RIVER DRAINAGE
1817	1B	1988	5	25	28%	20%	N	VIXEN INLET, UNION BAY
Total			18					
614	1A	1989	7	17	41%	41%	N	MEYERS CHUCK
821	1A	1989	1	1	6%	100%	N	SHEATON BAY
1315	2Z	1989	1	92	6%	1%	N	KASAAN PENINSULA, THORNE BAY
1421	2Z	1989	1	224	6%	0%	N	SWEETWATER LAKE, LOGJAM CREEK
1422	2Z	1989	1	375	6%	0%	Y	STANLEY CREEK, NAUKATI, SARKAR
1531	2Z	1989	3	45	18%	7%	Y	TUXEKAN, MARBLE, SEA OTTER SOUND
1817	1B	1989	3	13	18%	23%	N	VIXEN INLET, UNION BAY
Total			17					

Table E-27 (Continued)

Meyers Chuck Deer Harvest by WAA and Year

WAA	GMU	YEAR	Meyers Chuck Harvest	Total WAA Harvest	Percent of My. Ch. Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
613	1A	1990	0	183	0%	0%	N	HELM BAY
614	1A	1990	3	17	18%	18%	N	MEYERS CHUCK
821	1A	1990	0	0	0%	0%	N	SMEATON BAY
1214	2Z	1990	2	100	12%	2%	N	SKOWL ARM, POLK INLET
1315	2Z	1990	5	144	29%	3%	N	KASAAN PENINSULA, THORNE BAY
1323	2Z	1990	0	101	0%	0%	Y	WESTERN PRINCE OF WALES IS.
1526	2Z	1990	7	26	41%	27%	Y	HOLBROOK MT., NORTHERN KOSCIUSKO IS.
1530	2Z	1990	0	215	0%	0%	Y	EXCHANGE COVE, WHALE PASSAGE
1817	1B	1990	0	14	0%	0%	N	VIXEN INLET, UNION BAY
Total			17					

Note: Some WAA boundaries and/or numbers have changed since 1987.

Source: ADF&G, Division of Wildlife Conservation harvest records.

Table E-28

Petersburg Deer Harvest by WAA and Year

WAA	GMU	YEAR	Petbg. Harvest	Total WAA Harvest	Percent of Petbg. Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
202	1A	1987	5	19	0%	26%	N	ANNETTE IS.
1315	22	1987	10	235	1%	4%	N	KASAAN PENINSULA, THORNE BAY
1316	22	1987	97	140	7%	69%	N	KARTA BAY
1319	22	1987	10	285	1%	4%	N	THORNE RIVER DRAINAGE
1420	22	1987	5	220	0%	2%	N	COFFMAN COVE, LUCK LAKE, RATZ HARBOR
1421	22	1987	15	539	1%	3%	N	SHEETWATER LAKE, LOGJAM CREEK
1422	22	1987	24	495	2%	5%	Y	STANEY CREEK, NAUKATI, SARKAR
1526	22	1987	5	67	0%	7%	Y	TUXEKAN, MARBLE, SEA OTTER SOUND
1527	22	1987	73	416	5%	18%	Y	EXCHANGE COVE, WHALE PASSAGE
1528	22	1987	19	72	1%	26%	N	SALMON BAY
1529	22	1987	58	295	4%	20%	N	MT. CALDER, RED BAY, PORT PROTECTION
1601	1B	1987	0	0	0%	0%	N	FANSHAW-FARRAGUT AREA
1603	1B	1987	0	0	0%	0%	N	THOMAS BAY
1605	1B	1987	24	24	2%	100%	N	MUDDY RIVER, PATTERSON GLACIER
1706	1B	1987	10	10	1%	100%	N	HORN CLIFFS, LE CONTE BAY
1904	32	1987	15	53	1%	28%	N	WORONKOFSKI AND STIKINE MOUTH IS.
1905	32	1987	10	10	1%	100%	N	ZAREMBO IS.
1906	32	1987	0	25	0%	0%	N	KASHEVAROF ISLANDS
2007	32	1987	5	5	0%	100%	Y	MITKOF IS.
2010	32	1987	0	0	0%	0%	Y	ROCKY PASS/KUPREANOF
3001	42	1987	0	1248	0%	0%	Y	NAKVASINA, NEVA STRAIT AREA
3002	42	1987	10	437	1%	2%	Y	SITKA ROAD SYSTEM
3104	42	1987	0	585	0%	0%	N	NORTHERN KRUIZOF IS.
3206	42	1987	0	286	0%	0%	N	REDOUBT LAKE, NECKAR ISLANDS
3308	42	1987	111	361	8%	31%	N	KOOK LAKE, SITKOH BAY, FALSE IS.
3313	42	1987	48	217	3%	22%	N	RODMAN AND SAKOK BAY DRAINAGES
3315	42	1987	68	218	5%	31%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
3417	42	1987	29	379	2%	8%	N	WEST COAST CHICHAGOF
3522	42	1987	5	284	0%	2%	Y	PT. ADOLPHUS, MUD BAY AREA
3629	42	1987	0	404	0%	0%	N	SOUTHERN SHORE TENAKEE INLET
3731	42	1987	34	131	2%	26%	N	KELP BAY-TAKATZ BAY
3732	42	1987	5	20	0%	25%	N	WARM SPRINGS COAST
3733	42	1987	44	140	3%	31%	N	WHALE BAY DRAINAGES, WILDERNESS COAST

Table E-28 (Continued)

Petersburg Deer Harvest by WAA and Year

WAA	GMU	YEAR	Petbg. Harvest	Total WAA Harvest	Percent of Petbg. Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
3734	42	1987	15	93	1%	16%	N	SOUTHERN BARANOF IS.
3836	42	1987	10	478	1%	2%	N	HAWK INLET, YOUNG BAY DRAINAGES
3938	42	1987	117	264	8%	44%	N	GAMBIER BAY DRAINAGES
3939	42	1987	262	405	18%	65%	N	PYBUS BAY DRAINAGES
3940	42	1987	155	225	11%	69%	N	PT. GARDNER, ELIZA HARBOR
4042	42	1987	5	295	0%	2%	Y	ANGOON AREA
4043	42	1987	5	0	0%	0%	N	CENTRAL ADMIRALTY LAKES
4145	42	1987	29	146	2%	20%	N	TIEDEMAN IS.-MOLE HARBOR AREA
4146	42	1987	83	240	6%	35%	N	WINDFALL HARBOR, SWAN COVE DRAINAGES
4147	42	1987	19	595	1%	3%	Y	UPPER SEYMOUR CANAL
Total				1439				
1003	22	1988	11	126	1%	9%	N	HECETA IS.
1420	22	1988	5	185	0%	3%	N	COFFMAN COVE, LUCK LAKE, RATZ HARBOR
1421	22	1988	5	329	0%	2%	N	SHEETWATER LAKE, LOGJAM CREEK
1422	22	1988	0	286	0%	0%	Y	STANEY CREEK, NAUKATI, SARKAR
1524	22	1988	5	5	0%	100%	N	WARREN IS.
1526	22	1988	53	115	4%	46%	Y	HOLBROOK MT., NORTHERN KOSCIUSKO IS.
1527	22	1988	16	43	1%	37%	Y	PRINCE OF WALES EL CAPITAN AREA
1528	22	1988	16	63	1%	25%	N	SALMON BAY
1529	22	1988	21	146	2%	14%	N	MT. CALDER, RED BAY, PORT PROTECTION
1530	22	1988	5	201	0%	2%	Y	EXCHANGE COVE, WHALE PASSAGE
1602	18	1988	0	0	0%	0%	N	FARRAGUT RIVER DRAINAGE
1603	18	1988	0	0	0%	0%	N	THOMAS BAY
1605	18	1988	42	42	4%	100%	N	MUDDY RIVER, PATTERSON GLACIER
1706	18	1988	11	11	1%	100%	N	HORN CLIFFS, LE CONTE BAY
1707	18	1988	5	0	0%	0%	N	NORTH ARM OF THE STIKINE
1904	32	1988	11	120	1%	9%	N	WONONKOFSKI AND STIKINE MOUTH IS.
1905	32	1988	5	11	0%	45%	N	ZAREMBO IS.
2927	1C	1988	0	0	0%	0%	N	PORT HOUGHTON-CAPE FANSHAW
3001	42	1988	21	1028	2%	2%	Y	NAKWHASINA, NEVA STRAIT AREA
3308	42	1988	0	186	0%	0%	N	KOOK LAKE, SITKOH BAY, FALSE IS.

Table E-28 (Continued)
Petersburg Deer Harvest by WAA and Year

WAA	GMU	YEAR	Petbg. Harvest	Total WAA Harvest	Percent of Petbg. Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
3311	42	1988	11	330	1%	3%	Y	USHK BAY-KAKUL NARROWS
3313	42	1988	16	125	1%	13%	N	RODMAN AND SAOK BAY DRAINAGES
3315	42	1988	69	184	6%	38%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
3523	42	1988	11	185	1%	6%	Y	EAST SIDE PORT FREDERICK, GAME CREEK
3531	42	1988	21	145	2%	14%	Y	WHITESTONE HARBOR, FALSE BAY DRAINAGES
3533	42	1988	5	118	0%	4%	Y	HUMPBAC, GALLAGHER CREEKS
3731	42	1988	302	440	26%	69%	N	KELP BAY-TAKATZ BAY
3732	42	1988	5	5	0%	100%	N	WARM SPRINGS COAST
3733	42	1988	32	113	3%	28%	N	WHALE BAY DRAINAGES, WILDERNESS COAST
3734	42	1988	0	87	0%	0%	N	SOUTHERN BARANOF IS.
3938	42	1988	106	317	9%	33%	N	GAMBIER BAY DRAINAGES
3939	42	1988	344	427	29%	81%	N	PYBUS BAY DRAINAGES
3940	42	1988	21	204	2%	10%	N	PT. GARDNER, ELIZA HARBOR
4041	42	1988	0	27	0%	0%	Y	WHITEWATER BAY, WILSON COVE
4147	42	1988	0	595	0%	0%	Y	UPPER SEYMOUR CANAL
9999	NA	1988	5	50	0%	10%	Y	NA
Total				1180				
1003	22	1989	14	128	1%	11%	N	HECETA IS.
1318	22	1989	5	399	0%	1%	Y	CRAIG, KLAUOCK AREAS
1319	22	1989	9	195	1%	5%	N	THORNE RIVER DRAINAGE
1323	22	1989	18	93	2%	19%	Y	WESTERN PRINCE OF WALES IS.
1420	22	1989	5	115	0%	4%	N	COFFMAN COVE, LUCK LAKE, RATZ HARBOR
1421	22	1989	9	224	1%	4%	N	SHEETWATER LAKE, LOGJAM CREEK
1422	22	1989	0	375	0%	0%	Y	STANEY CREEK, NAUKATI, SARKAR
1526	22	1989	46	110	4%	42%	Y	HOLBROOK MT., NORTHERN KOSCIUSKO IS.
1528	22	1989	23	51	2%	45%	N	SALMON BAY
1529	22	1989	28	157	3%	18%	N	MT. CALDER, RED BAY, PORT PROTECTION
1530	22	1989	14	196	1%	7%	Y	EXCHANGE COVE, WHALE PASSAGE
1531	22	1989	5	45	0%	11%	Y	TUXEKAN, MARBLE, SEA OTTER SOUND
1602	18	1989	5	5	0%	100%	N	FARRAGUT RIVER DRAINAGE
1603	18	1989	5	5	0%	100%	N	THOMAS BAY

Table E-28 (Continued)

Petersburg Deer Harvest by WAA and Year

WAA	G MU	YEAR	Petbg. Harvest	Total		Percent of Petbg. Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
				Petbg. Harvest	WAA Harvest				
1605	18	1989	37	37	37	3%	100%	N	MUDDY RIVER, PATTERSON GLACIER
1706	18	1989	9	9	9	1%	100%	N	HORN CLIFFS, LE CONTE BAY
1707	18	1989	0	5	5	0%	0%	N	NORTH ARM OF THE STIKINE
1708	18	1989	0	0	0	0%	0%	N	STIKINE RIVER DRAINAGE
1904	32	1989	9	122	122	1%	7%	N	WORONKOFSKI AND STIKINE MOUTH IS.
1905	32	1989	14	26	26	1%	54%	N	ZAREMBO IS.
1906	32	1989	0	37	37	0%	0%	N	KASHEVAROF ISLANDS
2927	10	1989	0	0	0	0%	0%	N	PORT HOUGHTON-CAPE FANSHAW
3308	42	1989	28	187	187	3%	15%	N	KOOK LAKE, SITKOH BAY, FALSE IS.
3309	42	1989	46	195	195	4%	24%	Y	NORTHERN SHORE HOONAH SOUND
3310	42	1989	5	365	365	0%	1%	Y	SOUTH ARM HOONAH SOUND
3313	42	1989	5	187	187	0%	3%	N	RODMAN AND SAOOK BAY DRAINAGES
3315	42	1989	133	216	216	12%	62%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
3523	42	1989	14	156	156	1%	9%	Y	EAST SIDE PORT FREDERICK, GAME CREEK
3524	42	1989	0	289	289	0%	0%	Y	HOONAH AREA
3525	42	1989	28	289	289	3%	10%	Y	FRESHWATER BAY DRAINAGES
3731	42	1989	46	107	107	4%	43%	N	KELP BAY-TAKATZ BAY
3732	42	1989	46	68	68	4%	68%	N	WARM SPRINGS COAST
3734	42	1989	28	152	152	3%	18%	N	SOUTHERN BARANOF IS.
3835	42	1989	0	227	227	0%	0%	N	NORTHERN MANSFIELD PENIN.
3938	42	1989	60	238	238	5%	25%	N	GAMBIER BAY DRAINAGES
3939	42	1989	220	346	346	20%	64%	N	PYBUS BAY DRAINAGES
3940	42	1989	110	157	157	10%	70%	N	PT. GARDNER, ELIZA HARBOR
4041	42	1989	0	43	43	0%	0%	Y	WHITEWATER BAY, WILSON COVE
4055	42	1989	14	75	75	1%	19%	Y	HOOD BAY, CHAIK BAY DRAINAGES
4145	42	1989	18	188	188	2%	10%	N	TIEDEMAN IS.-MOLE HARBOR AREA
4148	42	1989	18	264	264	2%	7%	Y	WEST SIDE GLASS PENIN.
4149	42	1989	28	141	141	3%	20%	Y	EAST SIDE GLASS PENIN.
4253	42	1989	0	200	200	0%	0%	Y	NEKA BAY DRAINAGES
Total			1102						

KASAAN PENINSULA, THORNE BAY

3%

0%

144

5

1990

22

1315

Table E-28 (Continued)
Petersburg Deer Harvest by WAA and Year

WAA	GMU	YEAR	Petbg. Harvest	Total WAA Harvest	Percent of Petbg. Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
1318	2Z	1990	5	429	0%	1%	Y	CRAIG, KLAUOCK AREAS
1319	2Z	1990	5	426	0%	1%	N	THORNE RIVER DRAINAGE
1323	2Z	1990	20	101	1%	20%	Y	WESTERN PRINCE OF WALES IS.
1420	2Z	1990	25	144	2%	17%	N	COFFMAN COVE, LUCK LAKE, RATZ HARBOR
1421	2Z	1990	10	118	1%	8%	N	SWEETWATER LAKE, LOGJAM CREEK
1422	2Z	1990	10	307	1%	3%	Y	STANEY CREEK, NAUKATI, SARKAR
1526	2Z	1990	5	26	0%	19%	Y	HOLBROOK MT., NORTHERN KOSCIUSKO IS.
1527	2Z	1990	0	27	0%	0%	Y	PRINCE OF WALES EL CAPITAN AREA
1528	2Z	1990	5	33	0%	15%	N	SALMON BAY
1529	2Z	1990	20	307	1%	7%	N	MT. CALDER, RED BAY, PORT PROTECTION
1530	2Z	1990	0	215	0%	0%	Y	EXCHANGE COVE, WHALE PASSAGE
1602	1B	1990	0	0	0%	0%	N	FARRAGUT RIVER DRAINAGE
1603	1B	1990	10	10	1%	100%	N	THOMAS BAY
1605	1B	1990	79	79	5%	100%	N	MUDDY RIVER, PATTERSON GLACIER
1706	1B	1990	35	35	2%	100%	N	HORN CLIFFS, LE CONTE BAY
1707	1B	1990	5	5	0%	100%	N	NORTH ARM OF THE STIKINE
1901	3Z	1990	5	23	0%	22%	Y	NORTHERN ETOLIN IS.
1904	3Z	1990	10	91	1%	11%	N	WORONKOWSKI AND STIKINE MOUTH IS.
1905	3Z	1990	10	54	1%	19%	N	ZAREMBO IS.
2926	1C	1990	5	22	0%	23%	N	WINDHAM BAY, CHUCK RIVER, HOBART BAY
3308	4Z	1990	20	160	1%	13%	N	KOOK LAKE, SITKOH BAY, FALSE IS.
3309	4Z	1990	30	371	2%	8%	Y	NORTHERN SHORE HOONAH SOUND
3310	4Z	1990	10	370	1%	3%	Y	SOUTH ARM HOONAH SOUND
3312	4Z	1990	5	205	0%	2%	N	DUFFIELD PENIN., BEAR BAY
3313	4Z	1990	20	137	1%	15%	N	RODMAN AND SAKOK BAY DRAINAGES
3315	4Z	1990	104	274	7%	38%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
3731	4Z	1990	69	154	4%	45%	N	KELP BAY-TAKATZ BAY
3733	4Z	1990	25	126	2%	20%	N	WHALE BAY DRAINAGES, WILDERNESS COAST
3938	4Z	1990	203	445	13%	46%	N	GAMBIER BAY DRAINAGES
3939	4Z	1990	332	420	22%	79%	N	PYBUS BAY DRAINAGES
3940	4Z	1990	322	557	21%	58%	N	PT. GARDNER, ELIZA HARBOR
4041	4Z	1990	5	64	0%	8%	Y	WHITEWATER BAY, WILSON COVE
4055	4Z	1990	30	183	2%	16%	Y	HOOD BAY, CHAIK BAY DRAINAGES

Table E-28 (Continued)
Petersburg Deer Harvest by WAA and Year

WAA	GMU	YEAR	Petbg. Harvest	Total WAA Harvest	Percent of Petbg. Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
4145	4Z	1990	25	249	2%	10%	N	TIEDEMAN IS.-MOLE HARBOR AREA
4146	4Z	1990	10	120	1%	8%	N	WINDFALL HARBOR, SWAN COVE DRAINAGES
4147	4Z	1990	20	195	1%	10%	Y	UPPER SEYMOUR CANAL
4148	4Z	1990	35	166	2%	21%	Y	WEST SIDE GLASS PENIN.
Total			1534					

Note: Some WAA boundaries and/or numbers have changed since 1987.
Source: ADF&G, Division of Wildlife Conservation harvest records.

Table E-29

Sitka Deer Harvest by WAA and Year

WAA	GMU	YEAR	Sitka Harvest	Total WAA Harvest	Percent of Sitka Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
1315	2Z	1987	6	235	0%	3%	N	KASAAN PENINSULA, THORNE BAY
1317	2Z	1987	0	122	0%	0%	N	TWELVE MILE ARM, HARRIS RIVER
1318	2Z	1987	6	494	0%	1%	Y	CRAIG, KLAOCK AREAS
1422	2Z	1987	6	495	0%	1%	Y	STANEY CREEK, NAUKATI, SARKAR
2101	1C	1987	11	11	0%	100%	N	GLACIER BAY NATIONAL PARK
3001	4Z	1987	1117	1248	20%	90%	Y	NAKAWASINA, NEVA STRAIT AREA
3002	4Z	1987	417	437	7%	95%	Y	SITKA ROAD SYSTEM
3003	4Z	1987	500	531	9%	94%	Y	SILVER BAY, DEEP INLET
3104	4Z	1987	567	585	10%	97%	N	NORTHERN KRUF OF IS.
3105	4Z	1987	344	383	6%	90%	N	SOUTHERN KRUF OF IS.
3206	4Z	1987	272	286	5%	95%	N	REDOUBT LAKE, NECKAR ISLANDS
3207	4Z	1987	183	183	3%	100%	N	CRAWFISH INLETS, NECKAR BAY
3308	4Z	1987	133	361	2%	37%	N	KOOK LAKE, SITKOH BAY, FALSE IS.
3309	4Z	1987	172	190	3%	91%	Y	NORTHERN SHORE HOONAH SOUND
3310	4Z	1987	339	402	6%	84%	Y	SOUTH ARM HOONAH SOUND
3311	4Z	1987	500	518	9%	97%	Y	USHK BAY-KAKUL NARROWS
3312	4Z	1987	250	250	4%	100%	N	DUFFIELD PENIN., BEAR BAY
3313	4Z	1987	106	217	2%	49%	N	RODMAN AND SAKOK BAY DRAINAGES
3315	4Z	1987	39	218	1%	18%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
3416	4Z	1987	144	163	3%	88%	N	KHAZ PENIN., SLOCUM ARM
3417	4Z	1987	172	379	3%	45%	N	WEST COAST CHICHAGOF
3523	4Z	1987	22	1066	0%	2%	Y	HOONAH AREA
3524	4Z	1987	0	261	0%	0%	Y	HOONAH AREA
3625	4Z	1987	11	535	0%	2%	Y	FRESHWATER BAY DRAINAGES
3626	4Z	1987	0	252	0%	0%	Y	NORTH SHORE TENAKEE INLET
3627	4Z	1987	0	46	0%	0%	N	CORNER BAY, TRAP BAY
3629	4Z	1987	111	404	2%	27%	N	SOUTHERN SHORE TENAKEE INLET
3731	4Z	1987	56	131	1%	43%	N	KELP BAY-TAKATZ BAY
3733	4Z	1987	61	140	1%	44%	N	WHALE BAY DRAINAGES, WILDERNESS COAST
3734	4Z	1987	28	93	0%	30%	N	SOUTHERN BARANOF IS.
3938	4Z	1987	11	264	0%	4%	N	GAMBIER BAY DRAINAGES
4041	4Z	1987	0	282	0%	0%	Y	WHITEWATER BAY, WILSON COVE
9999	NA	1987	128	216	2%	59%	Y	NA
Total			5712					

Sitka Deer Harvest by WAA and Year

WAA	GMU	YEAR	Sitka Harvest	Total WAA Harvest	Percent of Sitka Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
1319	2Z	1988	6	242	0%	2%	N	THORNE RIVER DRAINAGE
3001	4Z	1988	957	1028	20%	93%	Y	NAKVASINA, NEVA STRAIT AREA
3002	4Z	1988	574	592	12%	97%	Y	SITKA ROAD SYSTEM
3003	4Z	1988	469	489	10%	96%	Y	SILVER BAY, DEEP INLET
3104	4Z	1988	531	561	11%	95%	N	NORTHERN KRUFZOF IS.
3105	4Z	1988	111	111	2%	100%	N	SOUTHERN KRUFZOF IS.
3206	4Z	1988	117	145	2%	81%	N	REDOUBT LAKE, NECKAR ISLANDS
3207	4Z	1988	148	148	3%	100%	N	CRAWFISH INLETS, NECKAR BAY
3306	4Z	1988	228	228	5%	100%	Y	FISH BAY DRAINAGES
3308	4Z	1988	123	186	3%	66%	N	KOOK LAKE, SITKOH BAY, FALSE IS.
3309	4Z	1988	136	161	3%	84%	Y	NORTHERN SHORE HOONAH SOUND
3310	4Z	1988	253	272	5%	93%	Y	SOUTH ARM HOONAH SOUND
3311	4Z	1988	302	330	6%	92%	Y	USHK BAY-KAKUL NARROWS
3312	4Z	1988	123	179	3%	69%	N	DUFFIELD PENIN., BEAR BAY
3313	4Z	1988	99	125	2%	79%	N	RODMAN AND SAOOK BAY DRAINAGES
3315	4Z	1988	49	184	1%	27%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
3416	4Z	1988	130	149	3%	87%	N	KHAZ PENIN., SLOCUM ARM
3417	4Z	1988	117	267	2%	44%	N	WEST COAST CHICHAGOF
3419	4Z	1988	19	100	0%	19%	Y	UPPER LISIANSKI INLET, LISIANSKI RIVER
3524	4Z	1988	12	443	0%	3%	Y	HOONAH AREA
3525	4Z	1988	31	365	1%	8%	Y	FRESHWATER BAY DRAINAGES
3532	4Z	1988	12	316	0%	4%	Y	HUMPBAC, GALLAGHER CREEKS
3627	4Z	1988	6	111	0%	5%	N	CORNER BAY, TRAP BAY
3731	4Z	1988	62	440	1%	14%	N	KELP BAY-TAKATZ BAY
3733	4Z	1988	49	113	1%	43%	N	WHALE BAY DRAINAGES, WILDERNESS COAST
3734	4Z	1988	6	87	0%	7%	N	SOUTHERN BARANOF IS.
3938	4Z	1988	19	317	0%	6%	N	GAMBIER BAY DRAINAGES
4042	4Z	1988	0	134	0%	0%	Y	ANGOON AREA
4046	4Z	1988	12	116	0%	10%	Y	HOOD BAY, CHAIK BAY DRAINAGES
9999	NA	1988	37	50	1%	74%	Y	NA
Total			4738					

Table E-29 (Continued)
Sitka Deer Harvest by WAA and Year

WAA	GMU	YEAR	Sitka Harvest	Total WAA Harvest	Percent of Sitka Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
613	1A	1989	0	91	0%	0%	N	HELM BAY
1318	2Z	1989	5	399	0%	1%	Y	CRAIG, KLAUOCK AREAS
1422	2Z	1989	0	375	0%	0%	Y	STANEY CREEK, NAUKATI, SARKAR
1904	3Z	1989	0	122	0%	0%	N	WORONKOFSKI AND STIKINE MOUTH IS.
2306	1C	1989	11	11	0%	100%	N	EXCURSION INLET
3001	4Z	1989	516	553	14%	93%	Y	NAKVASINA, NEVA STRAIT AREA
3002	4Z	1989	586	638	16%	92%	Y	SITKA ROAD SYSTEM
3003	4Z	1989	426	458	12%	93%	Y	SILVER BAY, DEEP INLET
3104	4Z	1989	128	133	3%	96%	N	NORTHERN KRUFZOF IS.
3105	4Z	1989	53	78	1%	68%	N	SOUTHERN KRUFZOF IS.
3206	4Z	1989	186	186	5%	100%	N	REDOUBT LAKE, NECKAR ISLANDS
3207	4Z	1989	128	128	3%	100%	N	CRAWFISH INLETS, NECKAR BAY
3308	4Z	1989	43	187	1%	23%	N	KOOK LAKE, SITKOH BAY, FALSE IS.
3309	4Z	1989	144	195	4%	74%	Y	NORTHERN SHORE HOONAH SOUND
3310	4Z	1989	330	365	9%	90%	Y	SOUTH ARM HOONAH SOUND
3311	4Z	1989	277	306	8%	91%	Y	USHK BAY-KAKUL NARROWS
3312	4Z	1989	149	154	4%	97%	N	DUFFIELD PENIN., BEAR BAY
3313	4Z	1989	117	187	3%	63%	N	RODMAN AND SAOOK BAY DRAINAGES
3314	4Z	1989	122	135	3%	90%	Y	FISH BAY DRAINAGES
3315	4Z	1989	27	216	1%	13%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
3416	4Z	1989	96	96	3%	100%	N	KHAZ PENIN., SLOCUM ARM
3417	4Z	1989	154	248	4%	62%	N	WEST COAST CHICHAGOF
3418	4Z	1989	0	91	0%	0%	N	YAKOBI IS.
3524	4Z	1989	11	289	0%	4%	Y	HOONAH AREA
3525	4Z	1989	21	289	1%	7%	Y	FRESHWATER BAY DRAINAGES
3526	4Z	1989	11	286	0%	4%	Y	NORTH SHORE TENAKEE INLET
3551	4Z	1989	0	307	0%	0%	Y	WHITESTONE HARBOR, FALSE BAY DRAINAGES
3731	4Z	1989	21	107	1%	20%	N	KELP BAY-TAKATZ BAY
3733	4Z	1989	59	122	2%	48%	N	WHALE BAY DRAINAGES, WILDERNESS COAST
3734	4Z	1989	16	152	0%	11%	N	SOUTHERN BARANOF IS.
3938	4Z	1989	16	238	0%	7%	N	GAMBIER BAY DRAINAGES
3939	4Z	1989	0	346	0%	0%	N	PYBUS BAY DRAINAGES
4150	4Z	1989	5	291	0%	2%	Y	GRAND IS., OLIVER INLET, STINK CREEK
5013	3Z	1989	0	0	0%	0%	Y	ROCKY PASS/KUJU
Total			3658					

Sitka Deer Harvest by WAA and Year

WAA	GMU	YEAR	Sitka Harvest	Total WAA Harvest	Percent of Sitka Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
1003	22	1990	6	82	0%	7%	N	HECETA IS.
1318	22	1990	0	429	0%	0%	Y	CRAIG, KLAUOCK AREAS
1420	22	1990	0	144	0%	0%	N	COFFMAN COVE, LUCK LAKE, RATZ HARBOR
1421	22	1990	6	118	0%	5%	N	SWEETWATER LAKE, LOGJAM CREEK
2722	1C	1990	0	326	0%	0%	N	DOUGLAS IS.
3001	42	1990	753	783	18%	96%	Y	NAKHASINA, NEVA STRAIT AREA
3002	42	1990	539	585	13%	92%	Y	SITKA ROAD SYSTEM
3003	42	1990	302	319	7%	95%	Y	SILVER BAY, DEEP INLET
3104	42	1990	202	236	5%	86%	N	NORTHERN KRUF OF IS.
3105	42	1990	196	200	5%	98%	N	SOUTHERN KRUF OF IS.
3206	42	1990	107	122	3%	88%	N	REDOUBT LAKE, NECKAR ISLANDS
3207	42	1990	77	99	2%	78%	N	CRAWFISH INLETS, NECKAR BAY
3308	42	1990	47	160	1%	29%	N	KOOK LAKE, SITKOH BAY, FALSE IS.
3309	42	1990	267	371	6%	72%	Y	NORTHERN SHORE HOONAH SOUND
3310	42	1990	302	370	7%	82%	Y	SOUTH ARM HOONAH SOUND
3311	42	1990	338	354	8%	95%	Y	USHK BAY-KAKUL NARROWS
3312	42	1990	178	205	4%	87%	N	DUFFIELD PENIN., BEAR BAY
3313	42	1990	107	137	3%	78%	N	ROOMAN AND SADOOK BAY DRAINAGES
3314	42	1990	196	230	5%	85%	Y	FISH BAY DRAINAGES
3315	42	1990	65	274	2%	24%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
3416	42	1990	166	203	4%	82%	N	KHAZ PENIN., SLOCUM ARM
3417	42	1990	53	240	1%	22%	N	WEST COAST CHICHAGOF
3418	42	1990	6	101	0%	6%	N	YAKOBI IS.
3419	42	1990	6	126	0%	5%	Y	UPPER LISTANSKI INLET, LISTANSKI RIVER
3524	42	1990	0	220	0%	0%	Y	HOONAH AREA
3525	42	1990	36	316	1%	11%	Y	FRESHWATER BAY DRAINAGES
3551	42	1990	18	263	0%	7%	Y	WHITESTONE HARBOR, FALSE BAY DRAINAGES
3629	42	1990	12	127	0%	9%	N	SOUTHERN SHORE TENAKEE INLET
3731	42	1990	30	154	1%	19%	N	KELP BAY-TAKATZ BAY
3733	42	1990	65	126	2%	52%	N	WHALE BAY DRAINAGES, WILDERNESS COAST
3734	42	1990	59	188	1%	31%	N	SOUTHERN BARANOF IS.
4042	42	1990	6	80	0%	8%	Y	ANGOON AREA
4149	42	1990	0	200	0%	0%	Y	EAST SIDE GLASS PENIN.
4150	42	1990	5	281	0%	2%	Y	GRAND IS., OLIVER INLET, STINK CREEK
5016	32	1990	0	0	0%	0%	Y	TEBENKOF BAY
Total			4151					

Note: Some WAA boundaries and/or numbers have changed since 1987.

Source: ADF&G, Division of Wildlife Conservation harvest records.

Table E-30

Skagway Deer Harvest by WAA and Year

WAA	GMU	YEAR	Skagway Harvest	Total WAA Harvest	Percent of Skagway Harvest	Percent of Waa Harvest	WAA Change?	WAA Location
2722	1C	1987	4	380	11%	1%	N	DOUGLAS IS.
3002	4Z	1987	2	437	5%	0%	Y	SITKA ROAD SYSTEM
3206	4Z	1987	0	286	0%	0%	N	REDOUBT LAKE, NECKAR ISLANDS
3522	4Z	1987	4	284	11%	1%	Y	PT. ADOLPHUS, MUD BAY AREA
3523	4Z	1987	7	1066	19%	1%	Y	HOONAH AREA
3625	4Z	1987	16	535	43%	3%	Y	WHITESTONE HARBOR, FALSE BAY DRAINAGES
4405	1D	1987	2	2	5%	100%	N	CHILKOOT RIVER, EAST SIDE TAIYA INLET
4406	1D	1987	2	2	5%	100%	N	MTS. CARMACK, CLEVELAND
Total			37					
3524	4Z	1988	0	443	0%	0%	Y	HOONAH AREA
3531	4Z	1988	0	145	0%	0%	Y	WHITESTONE HARBOR, FALSE BAY DRAINAGES
3532	4Z	1988	10	316	100%	3%	Y	HUMPBACK, GALLAGHER CREEKS
3626	4Z	1988	0	220	0%	0%	Y	NORTH SHORE TENAKEE INLET
3629	4Z	1988	0	232	0%	0%	N	SOUTHERN SHORE TENAKEE INLET
Total			10					
2722	1C	1989	0	321	0%	0%	N	DOUGLAS IS.
3001	4Z	1989	0	553	0%	0%	Y	NAKWASINA, NEVA STRAIT AREA
3104	4Z	1989	0	133	0%	0%	N	NORTHERN KRUFZOF IS.
3310	4Z	1989	16	365	33%	4%	Y	SOUTH ARM HOONAH SOUND
3524	4Z	1989	0	289	0%	0%	Y	HOONAH AREA
3526	4Z	1989	4	286	8%	1%	Y	NORTH SHORE TENAKEE INLET
3629	4Z	1989	19	174	39%	11%	N	SOUTHERN SHORE TENAKEE INLET
3835	4Z	1989	0	227	0%	0%	N	NORTHERN MANSFIELD PENIN.
4044	4Z	1989	3	199	6%	2%	Y	SHEE-ATIKA DRAINAGES
4222	4Z	1989	6	257	12%	2%	Y	PT. ADOLPHUS, MUD BAY AREA
4253	4Z	1989	1	200	2%	1%	Y	NEKA BAY DRAINAGES
Total			49					

Table E-30 (Continued)
Skagway Deer Harvest by WAA and Year

WAA	GHU	YEAR	Skagway Harvest	Total WAA Harvest	Percent of Skagway Harvest	Percent of Waa Harvest	WAA Change?	WAA Location
1315	2Z	1990	2	144	5%	1%	N	KASAA PENINSULA, THORNE BAY
1317	2Z	1990	4	79	9%	5%	N	TWELVE MILE ARM, HARRIS RIVER
1529	2Z	1990	0	307	0%	0%	N	MT. CALDER, RED BAY, PORT PROTECTION
1905	3Z	1990	0	54	0%	0%	N	ZAREMBO IS.
3002	4Z	1990	0	585	0%	0%	Y	SITKA ROAD SYSTEM
3003	4Z	1990	0	319	0%	0%	Y	SILVER BAY, DEEP INLET
3524	4Z	1990	4	220	9%	2%	Y	HOONAH AREA
3629	4Z	1990	2	127	5%	2%	N	SOUTHERN SHORE TENAKEE INLET
3836	4Z	1990	23	297	53%	8%	N	HAWK INLET, YOUNG BAY DRAINAGES
4146	4Z	1990	8	120	19%	7%	N	WINDFALL HARBOR, SWAN COVE DRAINAGES
Total			43					

Note: Some WAA boundaries and/or numbers have changed since 1987.
Source: ADF&G, Division of Wildlife Conservation harvest records.

Table E-31
Tenakee Deer Harvest by WAA and Year

WAA	GMU	YEAR	Tenakee Harvest	Total WAA Harvest	Percent of Tenakee Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
3523	42	1987	5	1066	4%	0%	Y	HOONAH AREA
3625	42	1987	20	535	17%	4%	Y	WHITESTONE HARBOR, FALSE BAY DRAINAGES
3626	42	1987	56	252	46%	22%	Y	NORTH SHORE TENAKEE INLET
3627	42	1987	2	46	2%	4%	N	CORNER BAY, TRAP BAY
3628	42	1987	9	42	7%	21%	N	KADASHAN
3629	42	1987	12	404	10%	3%	N	SOUTHERN SHORE TENAKEE INLET
3630	42	1987	17	100	14%	17%	Y	UPPER TENAKEE INLET
			Total	121				
1529	22	1988	0	146	0%	0%	N	MT. CALDER, RED BAY, PORT PROTECTION
3525	42	1988	8	365	7%	2%	Y	FRESHWATER BAY DRAINAGES
3626	42	1988	63	220	56%	29%	Y	NORTH SHORE TENAKEE INLET
3627	42	1988	8	111	7%	7%	N	CORNER BAY, TRAP BAY
3628	42	1988	4	71	4%	6%	N	KADASHAN
3629	42	1988	22	232	19%	9%	N	SOUTHERN SHORE TENAKEE INLET
3630	42	1988	6	31	5%	19%	Y	UPPER TENAKEE INLET
3939	42	1988	0	427	0%	0%	N	PYBUS BAY DRAINAGES
9999	NA	1988	2	50	2%	4%	Y	NA
			Total	113				
101	1A	1989	0	101	0%	0%	N	GRAVINA IS.
1316	22	1989	0	65	0%	0%	N	KARTA BAY
1817	18	1989	0	13	0%	0%	N	VIXEN INLET, UNION BAY
1910	32	1989	0	15	0%	0%	Y	SOUTHERN ETOLIN IS.
2621	1C	1989	4	104	5%	4%	N	SHELTER IS.
3525	42	1989	10	289	12%	3%	Y	FRESHWATER BAY DRAINAGES
3526	42	1989	49	286	59%	17%	Y	NORTH SHORE TENAKEE INLET
3627	42	1989	2	95	2%	2%	N	CORNER BAY, TRAP BAY
3629	42	1989	18	174	22%	10%	N	SOUTHERN SHORE TENAKEE INLET
			Total	83				

Table E-31 (Continued)

Tenakee Deer Harvest by WAA and Year

WAA	GMU	YEAR	Tenakee Harvest	Total WAA Harvest	Percent of Tenakee Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
510	1A	1990	0	53	0%	0%	Y	MEETS BAY AREA
612	1A	1990	0	35	0%	0%	N	EASTERN CLEVELAND PENIN.
3525	4Z	1990	4	316	5%	1%	Y	FRESHWATER BAY DRAINAGES
3526	4Z	1990	50	355	57%	14%	Y	NORTH SHORE TENAKEE INLET
3627	4Z	1990	11	76	13%	14%	N	CORNER BAY, TRAP BAY
3628	4Z	1990	5	33	6%	15%	N	KADASHAN
3629	4Z	1990	13	127	15%	10%	N	SOUTHERN SHORE TENAKEE INLET
3630	4Z	1990	4	39	5%	10%	Y	UPPER TENAKEE INLET
Total			87					

Note: Some WAA boundaries and/or numbers have changed since 1987.

Source: ADF&G, Division of Wildlife Conservation harvest records.

Table E-32
Wrangell Deer Harvest by WAA and Year

WAA	GMU	YEAR	Wrangell Harvest	Total WAA Harvest	Percent of Wrangell Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
1420	22	1987	19	220	6%	9%	N	COFFMAN COVE, LUCK LAKE, RATZ HARBOR
1525	22	1987	6	12	2%	50%	N	SOUTHERN KOSCIUSKO IS.
1526	22	1987	13	67	4%	19%	Y	TUXEKAN, MARBLE, SEA OTTER SOUND
1527	22	1987	38	416	12%	9%	Y	EXCHANGE COVE, WHALE PASSAGE
1528	22	1987	13	72	4%	18%	N	SALMON BAY
1529	22	1987	6	295	2%	2%	N	MT. CALDER, RED BAY, PORT PROTECTION
1707	18	1987	0	0	0%	0%	N	NORTH ARM OF THE STIKINE
1708	18	1987	0	0	0%	0%	N	STIKINE RIVER DRAINAGE
1810	18	1987	0	0	0%	0%	N	VIRGINIA LAKE, GARNET MTN.
1811	18	1987	0	0	0%	0%	N	AARON CREEK DRAINAGE
1812	18	1987	0	0	0%	0%	N	MARTEN LAKE, HARDING RIVER DRAINAGE
1813	18	1987	0	0	0%	0%	N	BRADFIELD RIVER DRAINAGES
1817	18	1987	0	31	0%	0%	N	VIXEN INLET, UNION BAY
1901	32	1987	19	19	6%	100%	Y	SOUTHERN ETOLIN IS.
1902	32	1987	0	0	0%	0%	N	DEER IS.
1903	32	1987	25	25	8%	100%	N	WRANGELL IS.
1904	32	1987	38	53	12%	72%	N	WORONKOFSKI AND STIKINE MOUTH IS.
1905	32	1987	0	10	0%	0%	N	ZAREMBO IS.
1906	32	1987	25	25	8%	100%	N	KASHEVAROF ISLANDS
3001	42	1987	25	1248	8%	2%	Y	NAKWHASINA, NEVA STRAIT AREA
3313	42	1987	25	217	8%	12%	N	RODMAN AND SAKOK BAY DRAINAGES
3315	42	1987	0	218	0%	0%	N	CATHERINE ISLAND, LAKE EVA, HANUS BAY
3731	42	1987	13	131	4%	10%	N	KELP BAY-TAKATZ BAY
3733	42	1987	25	140	8%	18%	N	WHALE BAY DRAINAGES, WILDERNESS COAST
3938	42	1987	25	264	8%	9%	N	GAMBIER BAY DRAINAGES
3939	42	1987	0	405	0%	0%	N	PYBUS BAY DRAINAGES
4041	42	1987	6	282	2%	2%	Y	WHITEWATER BAY, WILSON COVE
Total			321					
406	1A	1988	0	104	0%	0%	N	CARROL INLET
1003	22	1988	6	126	2%	5%	N	HECETA IS.
1319	22	1988	12	242	3%	5%	N	THORNE RIVER DRAINAGE
1420	22	1988	0	185	0%	0%	N	COFFMAN COVE, LUCK LAKE, RATZ HARBOR

Table E-32 (Continued)
Wrangell Deer Harvest by WAA and Year

WAA	GMU	YEAR	Wrangell Harvest	Total WAA Harvest	Percent of Wrangell Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
1421	2Z	1988	0	329	0%	0%	N	SWEETWATER LAKE, LOGJAM CREEK
1526	2Z	1988	12	115	3%	10%	Y	HOLBROOK MT., NORTHERN KOSCIUSKO IS.
1528	2Z	1988	24	63	7%	38%	N	SALMON BAY
1529	2Z	1988	18	146	5%	12%	N	MT. CALDER, RED BAY, PORT PROTECTION
1530	2Z	1988	36	201	10%	18%	Y	EXCHANGE COVE, WHALE PASSAGE
1707	1B	1988	6	0	2%	0%	N	NORTH ARM OF THE STIKINE
1708	1B	1988	0	0	0%	0%	N	STIKINE RIVER DRAINAGE
1810	1B	1988	12	12	3%	100%	N	VIRGINIA LAKE, GARNET MTN.
1901	3Z	1988	0	0	0%	0%	Y	NORTHERN ETOLIN IS.
1902	3Z	1988	0	0	0%	0%	N	DEER IS.
1903	3Z	1988	42	42	12%	100%	N	WRANGELL IS.
1904	3Z	1988	109	120	30%	91%	N	WORONKOFSKI AND STIKINE MOUTH IS.
1905	3Z	1988	6	11	2%	55%	N	ZAREMBO IS.
1906	3Z	1988	24	37	7%	65%	N	KASHEVAROF ISLANDS
1908	3Z	1988	12	12	3%	100%	Y	SOUTHERN ETOLIN IS.
3003	4Z	1988	0	489	0%	0%	Y	SILVER BAY, DEEP INLET
3525	4Z	1988	6	365	2%	2%	Y	FRESHWATER BAY DRAINAGES
3733	4Z	1988	12	113	3%	11%	N	WHALE BAY DRAINAGES, WILDERNESS COAST
3734	4Z	1988	18	87	5%	21%	N	SOUTHERN BARANOF IS.
3940	4Z	1988	0	204	0%	0%	N	PT. GARDNER, ELIZA HARBOR
5015	3Z	1988	6	11	2%	55%	Y	CORONATION IS.
5134	3Z	1988	0	0	0%	0%	Y	S. SHORE KUPREANOF
Total			361					
405	1A	1989	0	15	0%	0%	N	THORNE ARM, REVILLA IS.
510	1A	1989	0	56	0%	0%	Y	NEETS BAY AREA
612	1A	1989	0	76	0%	0%	N	EASTERN CLEVELAND PENIN.
901	2Z	1989	0	18	0%	0%	N	SUEMEZ IS.
1003	2Z	1989	0	128	0%	0%	N	HECETA IS.
1315	2Z	1989	0	92	0%	0%	N	KASAAN PENINSULA, THORNE BAY
1316	2Z	1989	5	65	1%	8%	N	KARTA BAY
1318	2Z	1989	5	399	1%	1%	Y	CRAIG, KLAHOCK AREAS
1319	2Z	1989	15	195	4%	8%	N	THORNE RIVER DRAINAGE

Table E-32
Wrangell Deer Harvest by WAA and Year

WAA	GMU	YEAR	Wrangell Harvest	Total WAA Harvest	Percent of Wrangell Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
1323	22	1989	5	93	1%	5%	Y	WESTERN PRINCE OF WALES IS.
1332	22	1989	0	23	0%	0%	Y	TROCADERO BAY, WATERFALL AREA
1421	22	1989	0	224	0%	0%	N	SWEETWATER LAKE, LOGJAM CREEK
1422	22	1989	5	375	1%	1%	Y	STANLEY CREEK, NAUKATI, SARKAR
1525	22	1989	5	24	1%	21%	N	SOUTHERN KOSCIUSKO IS.
1526	22	1989	5	110	1%	5%	Y	HOLBROOK MT., NORTHERN KOSCIUSKO IS.
1527	22	1989	0	12	0%	0%	Y	PRINCE OF WALES EL CAPITAN AREA
1528	22	1989	0	51	0%	0%	N	SALMON BAY
1529	22	1989	0	157	0%	0%	N	MT. CALDER, RED BAY, PORT PROTECTION
1530	22	1989	61	196	16%	31%	Y	EXCHANGE COVE, WHALE PASSAGE
1531	22	1989	0	45	0%	0%	Y	TUXEKAN, MARBLE, SEA OTTER SOUND
1707	18	1989	0	5	0%	0%	N	NORTH ARM OF THE STIKINE
1708	18	1989	0	0	0%	0%	N	STIKINE RIVER DRAINAGE
1810	18	1989	0	0	0%	0%	N	VIRGINIA LAKE, GARNET MTN.
1811	18	1989	0	0	0%	0%	N	AARON CREEK DRAINAGE
1901	32	1989	0	15	0%	0%	Y	NORTHERN ETOLIN IS.
1902	32	1989	5	5	1%	100%	N	DEER IS.
1903	32	1989	15	15	4%	100%	N	WRANGELL IS.
1904	32	1989	113	122	29%	93%	N	WORONKOFSKI AND STIKINE MOUTH IS.
1905	32	1989	5	26	1%	19%	N	ZAREMBO IS.
1906	32	1989	31	37	8%	84%	N	KASHEVAROF ISLANDS
1910	32	1989	15	15	4%	100%	Y	SOUTHERN ETOLIN IS.
3313	42	1989	0	187	0%	0%	N	RODMAN AND SAKOK BAY DRAINAGES
3731	42	1989	20	107	5%	19%	N	KELP BAY-TAKATZ BAY
3733	42	1989	46	122	12%	38%	N	WHALE BAY DRAINAGES, WILDERNESS COAST
3734	42	1989	10	152	3%	7%	N	SOUTHERN BARANOF IS.
3938	42	1989	10	238	3%	4%	N	GAMBIER BAY DRAINAGES
3939	42	1989	5	346	1%	1%	N	PYBUS BAY DRAINAGES
4041	42	1989	5	43	1%	12%	Y	WHITEWATER BAY, WILSON COVE
4055	42	1989	0	75	0%	0%	Y	HOOD BAY, CHAIK BAY DRAINAGES
Total			386					
406	1A	1990	0	71	0%	0%	N	CARROL INLET

Table E-32 (Continued)
Wrangell Deer Harvest by WAA and Year

WAA	GMU	YEAR	Wrangell Harvest	Total WAA Harvest	Percent of Wrangell Harvest	Percent of WAA Harvest	WAA Change?	WAA Location
1420	22	1990	5	144	2%	3%	N	COFFMAN COVE, LUCK LAKE, RATZ HARBOR
1526	22	1990	0	26	0%	0%	Y	HOLBROOK MT., NORTHERN KOSCIUSKO IS.
1528	22	1990	11	33	3%	33%	N	SALMON BAY
1530	22	1990	92	215	28%	43%	Y	EXCHANGE COVE, WHALE PASSAGE
1531	22	1990	0	52	0%	0%	Y	TUXEKAN, MARBLE, SEA OTTER SOUND
1708	18	1990	0	0	0%	0%	N	STIKINE RIVER DRAINAGE
1810	18	1990	0	0	0%	0%	N	VIRGINIA LAKE, GARNET MTN.
1811	18	1990	0	0	0%	0%	N	AARON CREEK DRAINAGE
1816	18	1990	5	5	2%	100%	N	SEWARD PASSAGE
1901	32	1990	11	23	3%	48%	Y	NORTHERN ETOLIN IS.
1902	32	1990	0	0	0%	0%	N	DEER IS.
1903	32	1990	16	16	5%	100%	N	WRANGELL IS.
1904	32	1990	81	91	25%	89%	N	WORONKOFSKI AND STIKINE MOUTH IS.
1905	32	1990	27	54	8%	50%	N	ZARENBO IS.
1906	32	1990	16	18	5%	89%	N	KASHEVAROF ISLANDS
1910	32	1990	16	30	5%	53%	Y	SOUTHERN ETOLIN IS.
3001	42	1990	5	783	2%	1%	Y	NAKWASINA, NEVA STRAIT AREA
3308	42	1990	5	160	2%	3%	N	KOOK LAKE, SITKOH BAY, FALSE IS.
3311	42	1990	16	354	5%	5%	Y	USHK BAY-KAKUL NARROWS
3312	42	1990	5	205	2%	2%	N	DUFFIELD PENIN., BEAR BAY
3314	42	1990	5	230	2%	2%	Y	FISH BAY DRAINAGES
3417	42	1990	0	240	0%	0%	N	WEST COAST CHICHAGOF
3940	42	1990	11	557	3%	2%	N	PT. GARDNER, ELIZA HARBOR
4148	42	1990	0	166	0%	0%	Y	WEST SIDE GLASS PENIN.
Total			327					

Note: Some WAA boundaries and/or numbers have changed since 1987.

Source: ADF&G, Division of Wildlife Conservation harvest records.

Appendix F

Biological Assessment

BIOLOGICAL ASSESSMENT
for the
SOUTHEAST CHICHAGOF PROJECT AREA

July, 1992

This Biological Assessment was prepared for the Southeast Chichagof Project Area to fulfill requirements of the Endangered Species Act (as amended) and the Forest Service threatened, endangered, and sensitive plant and animal species policy (FSM 2670). This assessment documents the occurrence of Federal and State threatened, endangered and candidate species, Alaska Region sensitive species, critical habitats within the Project Area, and potential effects on habitats or species from the proposed actions.

The focus here is on the endangered American peregrine falcon (Falco peregrinus), Aleutian Canada goose (Branta canadensis leucopareia), Eskimo curlew (Numenius borealis), humpback whale (Megaptera nonvaeangliae); the threatened Arctic peregrine falcon (Falco peregrinus tundrius) and Steller sea lion (Eumteopias jubata); and three Category 2 animal species as well as several Category 2 plant species.

The Project Area includes value comparison units (VCUs) 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, and 246 on the southeast corner of Chichagof Island.

I. IDENTIFICATION OF ENDANGERED, THREATENED, PROPOSED, AND SENSITIVE SPECIES AND/OR CRITICAL HABITATS FOR SUCH SPECIES WITHIN THE PROJECT AREA

A. Federal Threatened, Endangered, and Candidate Species

Background/Definitions

Federal listed threatened and endangered species are those plant and animal species formally listed by the U. S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS), under authority of the Endangered Species Act of 1973, as amended. An endangered species is defined as one which is in danger of extinction throughout all or a significant portion of its range. A threatened species is defined as one which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Candidate species are those being considered for listing as threatened or endangered by the USFWS and NMFS. Candidate species fall into three categories. Category 2 species are those species for which there is information indicating the species might qualify for endangered or threatened status, but on which further evaluation is needed.

Species listed as endangered or threatened are provided statutory protection under the Endangered Species Act of 1973, as amended; candidate species are not provided statutory protection. Therefore, technically, under the Endangered Species Act, agencies have no legal obligation to take action on Category 2 species.

Section 7 Consultation

In April 1990, the Forest Service requested (from the USFWS and the NMFS) lists of threatened and endangered and candidate (T & E & C) species which should be evaluated in the Southeast Chichagof Project Area. In a letter dated May 10, 1990, the National Marine Fisheries Service replied to the request and identified the humpback whale and Steller sea lion as the species which may occur near the Project Area (Penmoyer 1990b). Records are incomplete for the response to the initial correspondence with the FWS.

A second written request for information and consultation on T & E species was sent to FWS and NMFS on May 13, 1992 (Morrison 1992b). The Forest Service requested an update on the possible occurrence of threatened, endangered or candidate species in the Project Area. The reply from the National Marine Fisheries Service on May 20, 1991 (Penmoyer 1992), reaffirmed that the humpback whale and Steller sea lion are the only species of possible concern in the Project Area. In a June 15, 1992 letter from the NMFS with comments on the Draft Environmental Impact Statement (DEIS) for Southeast Chichagof (SECH), the NMFS concurred with the conclusion of "no affect" (Penmoyer 1992b).

The FWS (Gates 1992) response to the Southeast Chichagof (SECH) Draft Environmental Impact Statement (DEIS) lists the endangered American peregrine falcon, Aleutian Canada goose, and Eskimo curlew and the threatened Arctic peregrine falcon as T & E species likely to occur in the Project Area and which, therefore, should be evaluated. The FWS also says, "In light of their [T&E Species] seasonal presence, the Fish and Wildlife Service does not expect these species to be adversely affected by the proposed action."

On May 13, 1992, the Forest Service requested Section 7 consultation from the FWS. FWS response identified the endangered American peregrine falcon and the threatened Arctic peregrine falcon as species which may occur in the Project Area. The FWS letter (Lindell 1992a) says, "both of these peregrine subspecies occur in the area as transients, primarily during seasonal migration and likely would not be adversely affected by the proposed action."

The FWS provided comments on Category 2 species for FS consideration. According to the the FWS, three Category 2 animal species are likely to occur in the proposed Project Area: the Queen Charlotte goshawk (Accipiter gentilis laingi), marbled murrelet (Brachyramphus marmoratus), and harlequin duck (Histrionicus). Several Category 2 plant species potentially occur in the Project Area: Aster yukonensis, Calamagrostis crassiglumis, Carex lenticularis var. dolia and Montia bostockii.

There has been no critical habitat officially designated for any threatened and endangered species in the Project Area. Recovery plans have been completed for the Aleutian Canada goose, American peregrine falcon, Arctic peregrine falcon, and humpback whale. A draft recovery plan is completed for the Steller sea lion.

B. State of Alaska Endangered Species

The State of Alaska has an Endangered Species Law which authorizes the Commissioner of the Alaska Department of Fish and Game (ADF&G) to list Alaska endangered species.

The list of State endangered species (current as of July 1, 1992) includes: the Aleutian Canada goose, American peregrine falcon, Arctic peregrine falcon, blue whale (Balaenoptera musculus), Eskimo curlew, humpback whale, right whale (Balaena glacialis), and short-tailed albatross (Diomedea albatrus).

The American peregrine falcon, Aleutian Canada goose, Eskimo curlew and humpback whale are the only State listed species of possible concern in the Project Area.

C. Alaska Region Sensitive Species

Sensitive species are those plant and animal species identified by the Regional Forester whose population viability is a concern on National Forests within the Region. Sensitive species may also be those whose current populations and/or habitats are reduced or restricted, their habitats and/or populations are considered vulnerable to various management activities, and special management emphasis is needed to prevent the species from becoming threatened or endangered. Identification of sensitive species and emphasis on the management of sensitive species habitat are FS policy and not directly related to federally designated threatened and endangered species which are protected under the Endangered Species Act. The FS goal for sensitive species management is to ensure that species numbers and population distribution are adequate so that no Federal listing will be required and no Forest extirpation will occur.

The Alaska Region Sensitive Species List includes the osprey (Pandion haliaetus), Peale's peregrine (Falco Peregrinus peali), dusky Canada goose (Branta canadensis occidentalis), Trumpeter swan (Cygnus buccinator), Montague Island tundra vole (Microtus oeconomus elymocetes), northern pike (Esox lucius), Fish Creek chum salmon (Oncorhynchus keta), and King Salmon River and Wheeler Creek king salmon (Oncorhynchus tshawytscha). None of the Alaska Region Sensitive Species are known to occur or suspected of occurring in the Project Area.

No plants are currently listed by the Alaska Region as sensitive. Twenty-three vascular plants documented from National Forest System lands have been recommended for designation as Sensitive Species. These are:

1. Norberg arnica (Arnica lessingii ssp. norbergii)
2. Goose-grass sedge (Carex lenticularis var. dolia)
3. Indian paintbrush (Castilleja chrymactis)
4. Edible thistle (Cirsium edule)
5. Pretty shooting star (Dodecatheon pulchellum ssp. alaskanum)
6. Northern rockcress (Draba borealis var. maxima)
7. Kamchatka rockcress (Draba kamtschatica)
8. Tundra whitlow-grass (Draba kananaskis)
9. Davy mannagrass (Glyceria leptostachya)
10. Wright filmy fern (Hymenophyllum wrightii)
11. Truncate quillwort (Isoetes truncata)

12. Calder lovage (Ligusticum calderi)
13. Pale poppy (Papaver alboroseum)
14. Choris bog orchid (Platanthera chorisiana)
15. Bog orchid (Platanthera gracilis)
16. Loose-flowered bluegrass (Poa laxiflora)
17. Smooth alkali grass (Puccinellia glabra)
18. Kamchatka alkali grass (Puccinellia kamtschatica)
19. Three-flowered alkali grass (Puccinellia triflora)
20. Straight-beak buttercup (Ranunculus orthorhynchus var. alaschensis)
21. Unalaska mist-maid (Romanzoffia unalaschcensis)
22. Queen Charlotte butterweed (Senecio moresbiensis)
23. Circumpolar starwort (Stellaria ruscifolia ssp. aleutica)

Aster yukonensis, Calamagrostis crassiglumis, and Montia bostockii (Federally listed Category 2 plant species) are not included in this list because they have not been documented from lands that are currently administered by the Forest Service.

As a first step to ensure viability of sensitive and Category plants, Region 10 of the Forest Service has published a field guide to rare plants known to occur or considered likely to occur in the Tongass and Chugach National Forests of Alaska (Muller 1991). This guide is to serve as a training and field identification aid, to help increase awareness about the rare plants of the Region, and to lead to an improved inventory of these plants. Calamagrostis crassiglumis and Montia bostockii have been included in this field guide.

II. OVERVIEW OF SPECIES DISTRIBUTION AND POPULATIONS

A. Humpback Whales

Humpback whales (*Megaptera novaengliae*) are the most abundant endangered whales that occur in Southeast Alaskan waters. Their populations in the North Pacific are about 1,200, which is about 8 percent of prewhaling numbers. During the summer feeding season, these whales range widely from the subarctic boundary (about 30 degrees North Latitude) north into the Chukchi Sea. The greatest population densities are reached in certain inshore waters where the animals appear to be largely resident during the summer and autumn. Baker et al. (1985) estimate that 300-350 humpback whales inhabit Southeast Alaska during the summer and fall.

The main foods of humpback whales in Southeastern Alaska are euphausiaceans (Euphausia pacifica), herring (Clupea harengus), and capelin (Mallotus villosus). Nemoto (1970) noted that euphausiids and gregarious fish are the primary prey of humpbacks. Thirteen species of fish and 57 species of invertebrates were identified as humpback whale prey in Southeast Alaska. Humpbacks studied in Glacier Bay and Stephens Passage-Frederick Sound were found most frequently in areas of high prey density (Wing and Kreiger 1983).

Because the humpback inhabits shallow coastal areas, it is increasingly exposed to human activity. Consequently, these whales may be more susceptible to confrontational disturbance, displacement, and loss of habitat from environmental degradation than some other whale species. Humpbacks summering in Southeast Alaska have been linked to each of the three wintering areas in

Mexico, Hawaii, and Asia. In the Project Area, humpback whales use Peril and Chatham Straits and Tenakee Inlet.

B. Steller Sea Lion

The Steller (northern) sea lion ranges from Hokkaido, Japan, through the Kuril Islands and Okhotsk Sea, Aleutian Islands and central Bering Sea, Gulf of Alaska, Southeast Alaska, and south to central California. There is not sufficient information to consider animals in different geographic regions as separate populations. The centers of abundance and distribution are the Gulf of Alaska and Aleutian Islands, respectively.

In 1990, because of an abrupt population decline observed over the last 31 years (primarily in the Soviet Union, Gulf of Alaska, and Aleutian Islands), the NMFS listed the Steller sea lion as a threatened species throughout its range. The number of sea lions observed on certain rookeries from Kenai Peninsula to Kiska Island declined by 63 percent since 1985 and by 82 percent since 1960. Significant declines have also occurred on the Kuril Islands, USSR. During recent surveys, no declines were observed in Steller sea lion abundance within Southeast Alaska waters (Pennoyer 1992).

Several Steller sea lion haulouts and two rookeries occur within Southeast Alaska. The closest sea lion haulouts in the project vicinity are located at Lull Point (58°18.0'N 135°48.5'W) and Tenakee Cannery Point (57°46.4'N 135°04.0'W (Pennoyer 1992). Steller sea lions are expected to use waters within the Project Area for feeding. Important food resources include salmon, eulachon, and cephalopod mollusks. Prey species consumed and the distribution and abundance of sea lions in the Project Area are likely to vary seasonally (Pennoyer 1992a).

C. American Peregrine Falcon

The breeding, nesting, and rearing of young American peregrine falcon is primarily associated with interior Alaska; it occurs in Southeast Alaska only during migration periods. Population numbers in Alaska are increasing; the U.S. Fish and Wildlife Service is considering removing the species from the endangered list (Pennoyer 1992a).

D. Aleutian Canada Goose

The breeding, nesting, and rearing of young Aleutian Canada geese is primarily associated with the Aleutian Islands. The Aleutian Canada goose winters in western Oregon, northwestern and central California. Although their movements within Alaska are not well known, the Aleutian Canada goose may occur in Southeastern Alaska during migration. Population numbers in Alaska are increasing; the U. S. Fish and Wildlife Service is considering removing the species from the endangered list.

E. Eskimo Curlew

The Eskimo curlew is primarily associated with western and northern Alaska. The eskimo curlew is rare and not typical in Southeast Alaska; however, it may occur as a migrant in Southeast Alaska. There have been no confirmed sitings for at least a decade, maybe two (Lindell 1992b).

F. Arctic peregrine falcon

The Arctic peregrine falcon is primarily associated with the area north of the Brooks Range and Seward Peninsula; it is highly migratory, wintering as far south as northern Argentina (Ambrose et al. 1988). Population numbers in Alaska are increasing, and the USFWS is considering removing the species from the threatened list.

G. Queen Charlotte Goshawk

The northern goshawk breeds from western and central Alaska and northern Yukon to Labrador and Newfoundland, south to southern Alaska, central California, southern New Mexico, western South Dakota, northern Minnesota, and northwestern Connecticut, and in the northern Appalachian Mountains.

Goshawks are forest dwelling birds which prefer large trees for nesting. Closed forest canopies provide preferred microclimate in the nesting stand (Crocker-Bedford 1992). The Queen Charlotte goshawk is a subspecies of the Northern goshawk. The Queen Charlotte is endemic to Southeast Alaska and coastal British Columbia.

The USFWS has recently initiated a nationwide status review to evaluate and assess possible population declines of the northern goshawk. The FS has recently initiated a cooperative study with the Alaska Department of Fish and Game (ADF&G) to better understand the habitat relationships of the northern goshawk on the Tongass National Forest (Barton 1992). Forest Service units have been strongly encouraged to integrate goshawk inventories into planned field activities where practical in 1992 (Barton 1992).

A December 17, 1991 Status Report for R10 Sensitive Species Consideration reports that a total of five confirmed goshawk nests have been identified in Southeast Alaska (Capp 1991). In addition, 11 sites were identified which had enough evidence to strongly imply nesting, either currently or in the recent past. Of the five confirmed sites, three occurred in possible timber harvest units in proposed timber sales, one was no longer active, and one was located in an advanced (near rotation age) mature, second-growth stand (Capp 1991). In 1992, there are two confirmed active goshawk nests in the region (Iverson 1992).

H. Marbled Murrelet

The marbled murrelet is a small diving seabird that belongs to the family Alcidae. It is found along the Pacific Coasts of North America and Asia from southcentral California to the Barren and Aleutian Islands in Alaska, and from the Sea of Okhotsk, Kamchatka and Commander Islands, south to Korea, Japan, and the Kurile Islands (Marshall 1988, 1989; Sealy & Carter 1984).

The marbled murrelet occupies a feeding niche in the ocean near shore and in inland saltwater areas such as those found throughout Southeast Alaska (Marshall 1989). Evidence also suggests that inland freshwater lakes are used for feeding (Carter and Sealy 1986; Marshall 1989). Food consists mainly of small fish and invertebrates (Sealy 1975; Marshall 1989; Sanger 1987).

Unlike most other species in the family Alcidae, the marbled murrelet does not nest in colonies, although observations suggest that many nests can be in close proximity (Carter and Sealy 1987). The species nests on the ground, in the northern parts of its range where large trees are absent. Nests farther south are on large moss-covered branches of old-growth conifers which are up to 55 km (possibly up to 75 km) from salt water (Carter and Sealy 1986, 1987; Marshall 1988, 1989).

In 1984, during a marbled murrelet research project conducted by the Alaska Department of Fish and Game, a tree nest was found on North Baranof Island in the Kelp Bay area. The nest was on a large horizontal limb, 25 meters up, in a mountain hemlock tree. The tree was in an open, unevenaged stand of mountain hemlock at 366 meters elevation (Quinlan and Hughes 1984, 1990). During both years of the study, 1983 and 1984, marbled murrelets were the most abundant water bird in the Kelp Bay area during May and June. Estimates in 1983 were as high as 240 birds in late May and in 1984 as high as 104 birds on May 9. Murrelets were found most often in water less than 50 fathoms deep and along steep rocky coastlines (Quinlan and Hughes 1984).

A study of nesting murrelets on Naked Island in Prince William Sound is in progress but no findings are currently available.

Population estimates in Southeast Alaska vary from 50,000 to 75,000 (Mendenhall and McAllister 1987) and as many as 250,000 (Kessell and Gibson 1978). Surveys are currently being initiated by the Forest Service and U.S. Fish and Wildlife Service to determine population levels in Southeast Alaska and Prince William Sound.

I. Harlequin Duck

The harlequin duck breeds in northern and eastern Asia, the islands of the Bering Sea, and in continental North America and Alaska and the Yukon south to central California and Wyoming, and in northeastern North America from Baffin Island and Labrador to the Gaspé Peninsula and perhaps Newfoundland. It also breeds on Greenland and Iceland. The harlequin duck winters in North America from the Aleutian Islands south along the Pacific coast to California, and on the Atlantic coast from southern Canada to the New England states (Johnsgard 1979). The distribution of this species is extremely localized, and nearly all of the North American population is concentrated along the Pacific coast (Johnsgard 1979). Harlequin ducks nest adjacent to inland rivers and streams and commonly use near shore coastal waters throughout the year.

J. Aster yukonensis

This taxon is known from an area near Bettles, north of the Yukon River, and from the north side (continental side) of the St. Elias Range, north of Yakutat. The plant would not be expected to occur in the Project Area (Muller 1992).

K. Calamagrostis crassiglumis

Disjunct populations of this grass are known along the Pacific coast from Kodiak Island south to northern California. The plant grows in marshy wet areas, muddy areas near lakes, beach meadows, and rocky soil. This plant does

not grow in muskeg habitats. Based on collections in Alaska and British Columbia, the plant may be found in the Project Area (Muller 1992).

L. Carex lenticularis var. dolia

This sedge is known to be in the coastal mountains of southern Alaska and may be expected to occur in the Project Area (Muller 1992).

M. Montia bostockii

This small herb occurs in alpine and subalpine meadows in the Brooks Range through the Wrangell-St-Elias Range. It would not be expected to occur in the Project Area (Muller 1992).

III. ASSESSMENT OF EFFECTS ON THE POPULATIONS OR HABITATS OF THE SPECIES IN RELATION TO PROPOSED ACTIONS IN THE SOUTHEAST CHICHAGOF PROJECT AREA

The proposed actions would harvest up to 4,191 acres of timber, construct and reconstruct up to 109 miles of road, construct or reconstruct up to 4 LTFs, and house 40-80 workers seasonally in up to 3 camps during the 3 to 7 years' activities, depending on how the selected alternative is divided into offering areas.

Cumulative effects include past timber harvest, the proposed actions, and timber harvest in the reasonably foreseeable future. The Southeast Chichagof Environmental Impact Statement analyzes effects to the year 2011. The Alaska Pulp Corporation long-term timber sale contract will expire in 2011.

Between 126,833 and 130,517 acres of old-growth forest or at least 81 percent of the old-growth that existed in 1960 are projected to remain in the Project Area under the proposed actions through 2011 (Refer to Volume I, Chapter 4, Table 4-38, Projected Acres of Remaining Old Growth).

A. Humpback Whale

No studies or literature regarding the effects of logging activities on humpback whales are known to exist (Pennoyer 1990b). Since the humpback whale is totally associated with the marine environment, the analysis of potential effects of the alternatives will focus on those management activities associated with the marine environment. These management activities are the development and use of log transfer facilities (LTFs) and their associated camps and the movement of log rafts from log transfer facilities to mills. Generally, with the development and use of LTFs and other docking facilities for projects, there is an associated increase in recreational boating in the immediate vicinity during the construction and use of the facilities.

Construction and operation of LTFs and other docking facilities are restricted to small, very localized areas of the marine environment. From 1 to 4 LTFs would be required in the Project Area. Not all of the LTFs would be active at the same time. Table 1 displays the total number of LTFs anticipated with each alternative and the estimated acres of marine and estuary disturbance associated with the LTFs.

TABLE 1
TOTAL PROPOSED LTFs AND ACRES OF MARINE BENTHIC DISTURBANCE FOR EACH
ALTERNATIVE

Alternatives	B	C	D	E	F
Use Existing LTFs (False Island and Corner Bay)	1	2	1	1	2
Reconstruct LTFs (Crab Bay and Inbetween)	0	2	0	2	1
Proposed LTFs (Oly Creek)	0	0	1	1	1
Acres of Marine disturbance with LTFs	0.9	4.5	2.0	3.9	4.3

Generally, there is little likelihood of directly affecting whales with these facilities. Previously, approximately 20,000 acres of timber harvest occurred in the Southeast Chichagof Project Area with no known associated adverse effects on humpback whales. During the summer of 1989, there was a report of a humpback whale entangled in some cables from an inactive LTF site on the Stikine Area. To our knowledge, this is the only direct affect incident related to LTFs. Marine surveys conducted during the fall of 1991 at some of the LTF sites in the Southeast Chichagof Project Area did not detect steel cables from past logging activities. Disposal of steel cables into the marine environment is prohibited in permits issued for the construction and operation of LTF sites.

Two potential indirect effects of LTFs and other docking facilities and associated activities have been identified: 1) effects on whale prey species, and 2) disturbances of whales by boat traffic associated with LTFs.

Construction and operation of all LTFs and similar facilities require U.S. Army Corps of Engineer and U.S. Environmental Protection Agency permits, and State of Alaska Tidelands permits. The permitting process provides that construction and operation maintain water quality in the specific facility locations, and that marine circulation and flushing are maintained. All facilities must be in conformance with permit standards. No impacts are anticipated to the marine environment which would affect whale prey species.

Disturbance by boat activity has been suggested as one of the possible causes of observed changes in whale distribution in Southeast Alaska. Humpback whale response to nearby boating activity varies from approach and interaction with human activity to no apparent response or to pod dispersal, sounding, breaching, evasive underwater maneuvers, and maintaining distance (Baker and Herman 1983; Baker et al. 1982). Direct pursuit of whales by boats, and frequent changes in boat speed and direction appear to elicit avoidance behaviors more frequently than other types of boat traffic; however, there does not appear to be a single "response threshold" that will apply to all humpbacks in Southeast Alaska (Malme et al. 1989). On the other hand, whales may readily habituate to constant and familiar noise (NMFS 1983; Norris and Reeves 1978).

Whales are commonly found in some areas of Southeast Alaska which have considerable boat traffic; however, whether they are habituated to boat traffic has not been documented as far as we know. We are unaware of documented adverse effects from current levels of boat traffic.

Two basic types of boat activity would be associated with LTFs--log raft towing and recreational boating by workers. Log raft towing frequency would vary between camps, seasons, and years; a general average may be about once a week during the working season (U.S. Forest Service, 1989-94 Operating Period for the Ketchikan Pulp Company Long-term Sale Area). Tugs would maintain relatively constant speeds and directions during raft towing. Constant speed and direction elicit less avoidance behavior from whales than other types of boating activity. Log raft towing routes are generally well established, and adverse effects from log raft towing have not been documented.

Recreational boating activity would vary between seasons, years, and camps of different sizes. This activity would be concentrated near LTF sites, other docking facilities, and camps. It is estimated that most recreational boating would occur within a few miles of the site, few trips would be made over 10 miles, and activity greater than 30 miles from a site would be negligible. This boating would involve frequent changes in speed and direction. The effect of such recreational activity on whales would depend on many factors such as size of the bay, depth of the waters in the bay, number of boats, individual behavior responses of the whales, etc. At the present time, there is not a quantifiable way to estimate these possible effects.

Table 1 displays the estimated number of LTFs and marine disturbance for each of the alternatives. Alternatives which have the highest number of LTFs will most likely have the highest probability of indirect disturbance effects on whales. Not all of the LTFs will be active at one time, which will reduce the total potential disturbance effect.

Aircraft traffic will likely increase around the logging camps and LTF sites. No indication of long-term displacement of whales from aircraft overflights exists; however, reactions to helicopters approaching at altitudes below 250 meters has been documented (Malme et al. 1989). Fixed-wing and helicopter traffic serving logging camps is usually well above 250 meters for safety reasons except when landing or taking off.

The amount of human activity in the marine environment associated with Forest management activities is only a fraction of the total amount of human activity occurring in the marine environment. Other human activities occurring in the marine environment include commercial fishing, sport fishing, hunting, subsistence, tourism, mariculture, and many others. Literature indicates that the most serious threat to humpback whales is entanglement in fishing nets, shooting by hostile fishermen, and disruption or depletion of prey species by commercial fishing ventures (von Ziegesar 1984; Whitehead 1987). These activities are not regulated by the Forest Service.

No direct effects on whales from implementation of any of the alternatives are anticipated. Indirect effects may be associated with possible increased disturbance of whales. These indirect effects would be localized in nature, and would be highly variable, depending on many factors. The extent indirect effects influence population levels of humpback whales is unknown. Adverse or

cumulative effects on whale populations or their habitats are not anticipated with any of the alternatives.

The National Marine Fisheries Service has responsibility for threatened and endangered species of whales. There is a final recovery plan for the humpback whale. No critical habitat has been designated for whales in Southeast Alaska.

Forest-wide standards and guidelines for threatened and endangered species direct that all projects will comply with requirements of the Endangered Species Act, Marine Mammal Protection Act, and Forest Service Policy (FSM 2670).

B. Steller Sea Lion

The NMFS provides a summary of factors affecting the Steller sea lion (Federal Register Vol. 55, No. 66, 50 CFR Part 227). These factors include: reductions in the availability of food resources--especially pollock, which is the most important prey species for sea lions; commercial harvests of sea lion pups; subsistence harvests of sea lions; harvests for public display and scientific research purposes; predation by sharks, killer whales, and brown bear; disease; the inadequacy of existing regulatory mechanisms regarding quotas on the incidental harvesting of sea lions during commercial fishing operations; other natural or manmade factors such as incidences of fishermen shooting adult sea lions at rookeries, at haul-out sites, and in the water near boats. None of these factors are regulated or fall within the jurisdiction of the Forest Service.

Southeast Alaska populations declines have not been observed. However, harassment or displacement of sea lions from preferred habitats by human activities such as boating, recreation, aircraft, log transfer facilities, log raft towing, etc. is a concern with regard to long-term conservation of the sea lion in Southeast Alaska.

Forestwide standards and guidelines direct the Forest Service to prevent and/or reduce potential harassment of sea lions and other marine mammals as a result of activities carried out by or under the jurisdiction of the Forest Service. These Forestwide standards and guidelines are as follows:

Wildlife Habitat Planning

VII. Marine Mammal Habitats

- A. Provide for the protection and maintenance of harbor seal, Steller sea lion, and sea otter habitats.
 1. Ensure that Forest Service permitted or approved activities are conducted in a manner consistent with the Marine Mammal Protection Act and the Endangered Species Act. "Taking" of marine mammals is prohibited; "taking" includes harassment, pursuit, or attempting any such activity.
 2. Locate facilities and concentrated human activities requiring Forest Service approval as far from known marine mammal haulouts, rookeries and known concentration areas as

practicable. The following distances are provided as general guidelines for maintaining habitats and reducing human disturbance:

- * Locate camps, log transfer facilities, campgrounds and other developments 1 mile from known haulouts, and farther if the development is large.
 - * On Forest Service permitted and approved activities, direct aircraft flights over haulouts are prohibited. Within .5 miles (800 meters) of haul outs, maintain a constant flight direction and airspeed and a minimum flight elevation of 1000 feet (305 meters), when weather ceilings permit.
 - * For boat traffic on Forest Service permitted or approved activities, remain at least .5 miles (800 meters) away from hauled-out harbor seals during the pupping and rearing season (May 15 - July 1), when safe boat passage exists. Minimize disturbance of seals with pups in the water by remaining at least 330 feet (100 meters) away from parturient seals, when safe boat passage exists. (Note: These distances are derived from a study in a park where hunting is prohibited and access is restricted and where viewing seals is encouraged. Assess effects of these guidelines and amend the guidelines based upon the assessment.)
 - * Minimize disturbance effects of boat traffic: for molting harbor seals, remain .5 miles (800 meters) away from haulouts where seals are molting; for Steller sea lions, remain at least .5 miles (800 meters) away from haulouts and rookeries; for sea otters, avoid known feeding and resting concentration areas, especially following prolonged stormy periods when sea otters have been unable to feed.
 - * Individuals associated with Forest Service permitted or approved activities will not intentionally approach within 100 yards, or otherwise intentionally disturb or displace any hauled-out marine mammal.
3. Cooperate with State and other Federal agencies to develop sites and opportunities for the safe viewing and observation of marine mammals by the public. Maintain a public education program explaining Forest management activities related to marine mammals in cooperation with State and other Federal agencies.

There are no studies or literature regarding the effects of logging activities on Steller sea lions (Pennoyer 1990b). We are not aware of any adverse effects associated with previous timber harvest in the Project Area nor are we aware of any indirect effects from harassment or displacement.

No direct effects on sea lions from implementation of any of the alternatives are anticipated. Forestwide standards and guidelines have been developed to prevent and/or reduce indirect effects of harassment or displacement as a result of Forest Service management activities. No adverse or cumulative

effects on sea lion populations or their habitats are anticipated with any of the alternatives.

C. American Peregrine Falcon

The American peregrine falcon occurs in Southeast Alaska only during migration. During migration through Southeast Alaska, the availability and abundance of prey species will most likely be the primary habitat factor affecting peregrine falcons. In coastal areas of Washington, the primary prey species for peregrine falcons are shore birds and waterfowl species as well as passerine birds (Anderson and Debruyne 1979; Anderson et al. 1980). It is assumed that this would also be the case for coastal Alaska.

Peregrines forage over open sites such as over bodies of water, marshes, grasslands, shorelines, and over wooded areas. Peregrines attack flying prey from above or by chasing them. Although they forage over wide areas, they also have preferred foraging sites (White 1974).

Actual migration routes and patterns, and foraging areas have not been identified for the American peregrine falcon in Southeast Alaska. Forestwide standards and guidelines have been developed for protecting seabird rookeries and waterfowl concentration areas:

Seabird Rookeries

A. Provide for the protection and maintenance of seabird (marine bird) rookeries.

1. Locate facilities and concentrate human activities requiring Forest Service approval as far from known seabird colonies as practicable. The following distances are provided as general guidelines for maintaining habitats and reducing human disturbance:

For aircraft flights on Forest Service permitted or approved activities, when weather ceilings permit, maintain a constant flight direction and airspeed and a minimum flight elevation of 1,500 feet (458 meters) for helicopters and 500 feet (153 meters) for fixed-winged aircraft. If at all possible, avoid flying over seabird colonies.

2. Minimize the availability of garbage to gulls by requiring special use permittees to collect and dispose of garbage from their special use authorizations.
3. Cooperate with State and other Federal agencies to develop sites and opportunities for the safe viewing and observation of these species by the public. Maintain a public education program (in cooperation with State and other Federal agencies) explaining Forest management activities related to these species.

Waterfowl Habitats

- A. Maintain or enhance wetland habitats which receive high use by waterfowl species such as ducks, geese, and shore birds.
1. Identify, during project environmental analysis and in cooperation with the Alaska Department of Fish and Game and the U. S. Fish and Wildlife Service, any wetlands which receive high use by waterfowl.
 2. Locate facilities and concentrated human activities requiring Forest Service approval as far from known waterfowl concentration areas as practicable. Minimize disturbance of geese and waterfowl by restricting, when practicable, development activities to periods when geese and waterfowl are absent from the area.
 3. Maintain habitat capability in coastal wetlands and intertidal areas that are important migratory staging areas and fall/winter/spring concentration areas, and in wetlands that are important nesting and brood-rearing habitats, by avoiding where practical, all development activities which could fill wetlands, drain wetlands, or alter water levels resulting in loss of desirable vegetation or direct loss of habitat.
 4. Avoid, where possible, management activities within 410 feet (125 meters) of geese habitat when geese are present during nesting, brood rearing, molting, and wintering periods.
 5. Minimize human disturbance of habitats and protect wetland vegetation during critical periods of the year (nesting and brood-rearing, molting, and winter) by regulating human use (such as aircraft, hiking, boating, off-highway vehicle use) in important wetland areas. The following distance limits are provided as general guidelines for reducing possible human effects:

For aircraft flights on Forest Service approved projects, when weather ceilings permit: 1,500 feet (458 meters) above ground level for helicopters; 500 feet (153 meters) above ground level for fixed-wing aircraft; 1 mile (1.6 km) horizontal distance and 1,000 feet (305 meters) above ground level for fixed-wing aircraft over habitat used by molting geese.

Provide a minimum distance of 410 feet (125 meters) between human activities on the ground and areas being used by geese and other waterfowl.
 6. When human use results in significant adverse effects on waterfowl habitat, regulate such use to eliminate or reduce the adverse effects.
 7. Regulate off-highway vehicle use to prevent degradation of habitat or adverse disturbance of populations.

8. Develop waterfowl habitat improvement projects in cooperation with appropriate State and Federal agencies.
9. Protect and maintain the soil and water quality and quantity from disturbances of waste discharge and fill material (and other soil disturbances that lead to concentrations of surface water and soil erosion) which may lead to rill or gully erosion and subsequent water quality degradation.
10. For Special Use Administration (nonrecreational), issue only authorizations which meet the objectives of Executive Order 11990 (Protection of Wetlands). Issue permits which serve to preserve, enhance, or aid in the management of the natural and beneficial value of wetlands.
11. Perform integrated logging system and transportation analysis to determine if other practical routes exist which avoid these high use waterfowl areas.
12. If the need to restrict road access is identified during project interdisciplinary review, roads will be closed either seasonally or year-round to minimize adverse effects on waterfowl.
13. Cooperate with State and other Federal agencies to develop sites and opportunities for the safe viewing and observation of these species by the public. Maintain a public education program (in cooperation with State and other Federal agencies) which explains Forest management activities related to these species.

Adverse effects on the American peregrine falcon population or its habitat is not anticipated with any of the alternatives.

D. Aleutian Canada Goose

The Aleutian Canada goose is not primarily associated with Southeastern Alaska. Although migration patterns in Alaska are not well known, Aleutian Canada geese may occur in Southeast Alaska as migrants. A discussion with a U.S. Fish and Wildlife Service Biologist indicated that it was very unlikely that the Aleutian Canada goose occurs in the Project Area (Lindell 1992b). Therefore, adverse effects on the Aleutian Canada goose populations are not anticipated with any of the alternatives proposed in the Project Area.

E. Eskimo Curlew

The Eskimo curlew is not primarily associated with Southeastern Alaska. Although migration patterns in Alaska are not well known, Eskimo curlews may occur in Southeast Alaska as migrants. A discussion with a U.S. Fish and Wildlife Service Biologist indicated that it was very unlikely that the Eskimo curlew occurs in the Project Area (Lindell 199b). Therefore, adverse effects on the Eskimo curlew populations are not anticipated with any of the alternatives proposed for Project Area.

F. Arctic Peregrine Falcon

Correspondence with the USFWS indicates that the threatened Arctic peregrine falcon may occur in the Project Area as transients. This occurs primarily during seasonal migration and is not likely to be adversely affected by the proposed action (Gates 1992).

G. Queen Charlotte Goshawk

The USFWS has initiated a nationwide status review to evaluate whether the Queen Charlotte goshawk should be listed as threatened or endangered. Currently, there is little quantitative information available on the Queen Charlotte goshawk in Southeast Alaska. Surveys are now being initiated by the USFWS, ADF&G, and USDA FS throughout Southeast Alaska.

During the two years of field reconnaissance performed by the Forest Service in the Southeast Chichagof Project Area, there were 13 raptor sitings; however, there were no confirmed sitings of goshawks.

Timber harvest has been known to adversely affect goshawks. Habitat Conservation Areas (HCAs) have been proposed as a conservation strategy for goshawks on the Tongass National Forest (Crocker-Bedford 1992). Habitat conservation areas are areas of old-growth forest that are close enough together across the landscape to allow local populations of species of concern occupying each tract to adequately interact with nearby populations. Four HCAs which range in size from 10,000 to 40,000 acres occur in the Project Area (Figure 1). In addition, no cut timber buffers are prescribed for beach fringe, estuaries, and Class I and II streams throughout the Project Area. These buffers range in size from a minimum 100 feet for a Class II stream to 1000 feet along an estuary.

This year, interim habitat management recommendations for the northern goshawk have been developed for the Tongass National Forest. These recommendations are designed to sustain goshawk nesting habitats and retain management options on the forest while achieving forest goals. The following are interim goshawk habitat management recommendations.

The Northern Goshawk Management Area consists of three components:

1. Nest Area (NA)

The nest, nest tree, and approximately 20-30 forested acres surrounding the nest tree that includes prey handling areas, perches, and roosts. Stand structure should provide trees to support nest structures, a stable micro-environment, and protection from predators. NAs will be established for active nests and will be considered for sites where there is evidence of reproductive behavior or for inactive nests

Vegetative Description

A 20-30 acre contiguous stand with a relatively high percentage of tree canopy cover and high density of large trees (Volume Classes 5-7) generally centered around the nest tree.

Habitat Management

- * No vegetative manipulation.
- * No prolonged (i.e. greater than 3 days) mechanical activity (e.g. drilling, blasting, sawing, yarding) is permitted within

600 feet of active NAs from March 15 to September 1. Activity restrictions are removed after June 30 for active nests that become inactive or unsuccessful,

2. Post Fledging Area (PFA)

An area surrounding the NA where fledged young goshawks concentrate their activities until no longer dependent on adults for food. The PFA provides young hawks hiding cover from predators and prey to develop hunting skills before juvenile dispersal from the nesting area. The PFA is generally 600 acres and includes all NAs, hiding cover, prey species, and foraging opportunities for young goshawks. The PFA contains a variety of forest conditions and closely resembles the existing forest structure in NAs.

Vegetative Description

* A nearly contiguous stand (approximately 600 acres) of commercial forest (Volume Classes 4-7) generally centered around active nest areas. Up to 5 percent of the acreage may be in a less than 10-year-old age class. Inclusions of noncommercial forest and muskeg and acreage in road right-of-way will not be included in the total acreage. Riparian and Estuary/Beach Fringe buffers and high hazard soils within the PFA should be incorporated where possible.

Habitat Management

* Timber harvest of volume classes will occur in proportion to occurrence within the Value Comparison Unit(s) containing the PFA.

* Opening size resulting from timber harvest will not exceed 20 acres.

3. Foraging Area (FA)

The area used by young and adult goshawks to meet their food requirements. FAs range from 5000 to 8000 acres. The goshawk is an opportunistic forager and the FA may contain a mosaic of habitat types. At least 20 percent should be in commercial forest lands, Volume Classes 4-7. The size of the FA depends on habitat quality and arrangement of forest and openings that contributes to prey productivity and foraging opportunities.

In light of the northern goshawk's sensitivity to timber harvest and its listing as Category 2 species, measures are being taken to ensure the goshawk viability. These measures include delineation of HCAs and the following of the regional interim habitat management recommendations. Goshawk surveys should be conducted in the Project Area prior to timber harvest. If the interim habitat management guidelines are adhered to, northern goshawks are not expected to be significantly adversely affected by the proposed actions discussed in Southeast Chichagof Final Environment Impact Statement.

H. Marbled Murrelet

Evidence (albeit based on few actual records of marbled murrelet nests) has been mounting over the past 15 years which indicates that the marbled murrelet

is closely associated with old-growth coniferous forests in the southern part of its range (Paton and Ralph 1988; Marshall 1989; Sealy and Carter 1984; Carter and Sealy 1987). Specific nest records characterize nesting habitat as moss-covered limbs of large conifer trees (Binford et al. 1975; Kiff 1981; Quinlan and Hughes 1984, 1990). Although data suggests the use of old-growth forests, use of older second-growth forest that may have suitable moss-covered limbs has not been researched.

The factors currently limiting marbled murrelets in Southeast Alaska have not been identified. Factors that may threaten marbled murrelets include loss of nesting habitat to clearcut logging, mortality from gill-net fisheries, mortality from oil pollution (Carter and Sealy 1984; Marshall 1989), and the possible loss of foraging habitat to aquaculture facilities (Marshall 1989). Of these, the Forest Service only has control over logging of old-growth forests.

The relationship between old-growth forests available for nesting and marbled murrelet populations is unknown at this time. However, the amount of nesting habitat for murrelets will likely be reduced in areas with timber harvesting. Some evidence suggests that nesting use is in open stands of timber (Quinlan and Hughes 1984, 1990; Marshall 1988; Binford et al. 1975) and at elevations of approximately 300 meters elevation (Quinlan and Hughes 1984, 1990; Binford et al. 1975; Day et al. 1983).

Currently, not enough evidence exists to conclude that the marbled murrelet population is likely to be adversely effected with any of the alternatives proposed in the Southeast Chichagof FEIS. Current studies on Naked Island in Prince William Sound may provide more information on nest site selection that can be used to anticipate impacts from timber harvest in coastal Alaska.

Based on current information, a reduction in available nesting habitat may occur; however, it is not known if this will result in adverse effects on the marbled murrelet population in the Project Area. The delineated HCAs should moderate any reduction in nesting habitat from timber harvest.

J. Aster yukonensis

Not known to occur in the Project Area; therefore, there are no effects (Muller 1992).

K. Calamagrostis crassiglumis

Not known to occur in forested areas; therefore, no direct effects from timber harvest. Changes in drainage due to roading or other activities may impact habitat and populations of the plant (Muller 1992). Stream, estuary, and lakeshore buffers should provide adequate protection for this plant.

L. Carex lenticularis var. dolia

Not known to occur in forested areas; therefore, there are no effects (Muller 1992).

M. Montia bostockii

Not known to occur in the Project Area, therefore, there are no effects (Muller 1992).

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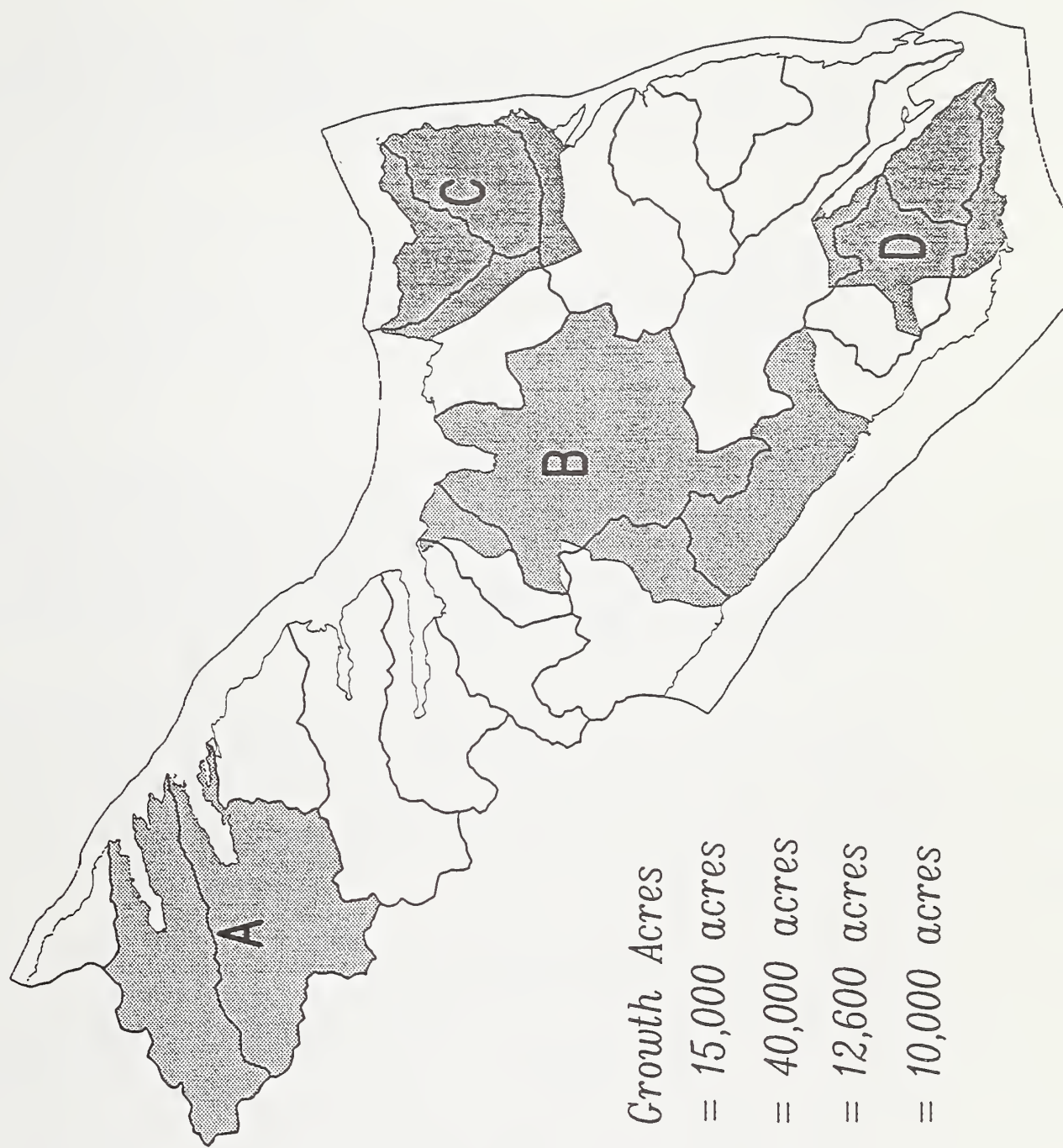
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Figure 1
HABITAT CONSERVATION AREAS



<i>Old Growth Acres</i>	
A	= 15,000 acres
B	= 40,000 acres
C	= 12,600 acres
D	= 10,000 acres



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Fish and Wildlife Enhancement

Ecological Services Juneau

Southeast Alaska Ecological Services

P.O. Box 021287

Juneau, Alaska 99802-1287

(907) 586-7240

IN REPLY REFER TO:

Gary Morrison, Forest Supervisor
Chatham Area
Tongass National Forest
204 Siginaka Way
Sitka, AK 99835

July 14, 1992

Dear Mr. Morrison:

This responds to your May 13, 1992 letter requesting information concerning listed or proposed threatened or endangered species within the proposed Southeast Chichagof Project Area, Chichagof Island, Alaska. It is our understanding that you will soon finalize an environmental Impact Statement regarding the Southeast Chichagof Project Area which includes a current proposal to cut timber and construct roads on approximately 5000 acres within the 288,301 acre project.

For the purpose of Section 7 consultation, we offer the following comments. As noted in your letter, the endangered American peregrine falcon (Falco peregrinus anatum) may occur in the project area. The threatened Arctic peregrine falcon (F. p. tundrius) may also occur in the area. Both of these peregrine subspecies occur in the area as transients, primarily during seasonal migration and likely would not be adversely affected by the proposed action.

The following comments regarding Category 2 candidate species are offered as technical assistance for your consideration. Three category 2 candidate animal species are likely to occur in the proposed project area, including the Queen Charlotte goshawk (Accipiter gentilis laingi) marbled murrelet (Brachyramphus marmoratus), and Harlequin duck (Histrionicus). The marbled murrelet and Queen Charlotte goshawk are typically associated with old growth/mature forest habitat, which provide one or more critical elements for their life requirements. Where the proposed actions would result in loss of these habitats, it is likely there would be significant adverse impacts on these species. Harlequin ducks nest adjacent to inland rivers and streams and commonly use near shore coastal waters throughout the year. The affect of the proposed actions on Harlequin ducks would depend on the nature and time of site specific land alteration. It is likely that significant perturbation of near stream habitat, particularly during the

nesting period, would adversely impact Harlequin ducks within the project area.

There are several category 2 plant species potentially occurring in the project area, including Aster yukonensis, Calamagrostis crossiglumis, Carex lenticularis var. dolia and Montia bostockii. Information concerning these or other sensitive plant species is limited, but the FEIS should include a review and discussion of candidate plants.

These comments are offered for endangered and threatened species for which the U.S. Fish and Wildlife Service has responsibility under Section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1521 et seq.) and its amendments. The above comments are specific to the Endangered Species Act and do not reflect agency concerns regarding other organisms or habitats for which the Service has legislated responsibilities.

Sincerely,

A handwritten signature in dark ink, appearing to read "John Lindell", written over a faint circular stamp or seal.

John Lindell
Acting Field Supervisor



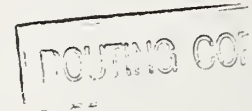
UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

National Marine Fisheries Service

P.O. Box 21668

Juneau, Alaska 99802-1668

May 20, 1992



Mr. Gary A. Morrison
Forest Supervisor, Chatham Area
204 Sigina Way
Sitka, Alaska 99835

Attn: Gordon Anderson

RE: Endangered Species Act, Section 7 Informal Consultation for
the Southeast Chichagof Project Area on Chichagof Island.

Dear Mr. Morrison:

Thank you for your recent letter that requested information on threatened or endangered species under our jurisdiction that may occur in the project area.

As your letter stated, the humpback whale, Megaptera novaeangliae, is the only endangered species under our purview that may occur near the project area. In 1990 the NMFS listed the Steller sea lion as a threatened species throughout its range because of an abrupt population decline observed over the last 31 years, primarily in the Soviet Union, Gulf of Alaska, and Aleutian Islands (November 26, 1990, 55 FR 49204). The causes of the population decline are unknown. Presently, a decline in Steller sea lion abundance within southeast Alaska waters has not been observed during surveys.

Several Steller sea lion haulouts and two rookeries occur within southeast Alaska. The closest sea lion haulouts in the project vicinity are located at Lull Point (58°18.0'N 135°48.5'W) and Tenakee Cannery Point (57°46.4'N 135°04.0'W). We would expect Steller sea lions and humpback whales to use waters within the project vicinity for feeding. Important food resources include walleye pollock, Pacific cod, flatfish, Pacific herring, Pacific salmon, eulachon, and cephalopod mollusks. Prey species consumed and the distribution and abundance of sea lions and humpback whales in the area are likely to vary seasonally.

Any activity that may affect the Steller sea lion or humpback whale, their habitats, or their food resources should be considered in your analysis for Section 7 consultation purposes. Currently, critical habitat for these species has not yet been designated under the Endangered Species Act. A biological assessment should be written describing the project, potential interactions with these species or their habitat, and your determination of whether the project "may affect" or "will not affect" the endangered whale or threatened sea lion.



If your biological assessment concludes the project will not affect the humpback whale or Steller sea lion, and we concur, then the USDA Forest Service's Section 7 responsibilities will have been fulfilled. If, however, it is found the project may affect endangered whales or threatened sea lions, then the USDA Forest Service would be obliged to initiate formal consultation with us, leading to our preparation of a biological opinion on the likelihood of jeopardy to the species.

We appreciate the opportunity to provide this information.

Sincerely,

A handwritten signature in cursive script, reading "Steven Pennoyer". The signature is written in dark ink and is positioned above the printed name and title.

Steven Pennoyer
Director, Alaska Region



Appendix G

Wildlife Habitat Models



WILDLIFE HABITAT CAPABILITY MODELS

Habitat capability models are a management tool developed by biologists in Southeast Alaska to assist in the evaluation of effects of proposed land management activities on wildlife habitats and populations. A habitat capability model is a compilation of biological information that describes the habitat requirements of management indicator species (MIS). The objective of the models is to estimate the capability of habitats to support animal populations. The end result of each model is an estimation of a habitat suitability index (HSI) and associated population carrying capacity for each physical and biological condition on the National Forest. These models were developed by an interagency task force consisting of members from the Alaska Department of Fish and Game, The United States Fish and Wildlife Service, and the USDA Forest Service. The models were run on the Chatham Area GIS database to estimate wildlife habitat indices.

Authors of the specific computer macros written to calculate habitat suitability index (HSI) values using habitat information available in the geographic information system (GIS) are listed below.

Sitka Black-tailed Deer - Winter Habitat

Suring, L., G. Degayner, and R. Griffen. March, 1991

Brown Creeper - Winter Habitat

Suring, L., G. Degayner and R. Griffen. October 9, 1989.

Hairy Woodpecker - Winter Habitat

Suring, L., G. Degayner and R. Griffen. October 9, 1989.

Red-breasted Sapsucker - Breeding Habitat

Suring, L., G. Degayner and R. Griffen. October 9, 1989.

Vancouver Canada Goose - Nesting and Brood Rearing Habitat

Falkner, T. December 5, 1990.

Bald Eagle - Nesting Habitat

Suring, L., G. Degayner and R. Griffen. September 8, 1989.

River Otter - Spring Habitat

Suring, L., G. Degayner and R. Griffen. August 10, 1989.

Red Squirrel - Year Round Habitat

Suring, L., G. Degayner and R. Griffen. November 28, 1989.

Mountain Goat - Winter Habitat

Suring, L., G. Degayner and R. Griffen. January 23, 1990.

Brown Bear - Late Summer Habitat

Suring, L., G. Degayner and R. Griffen. January 23, 1990.

Marten - Winter Habitat

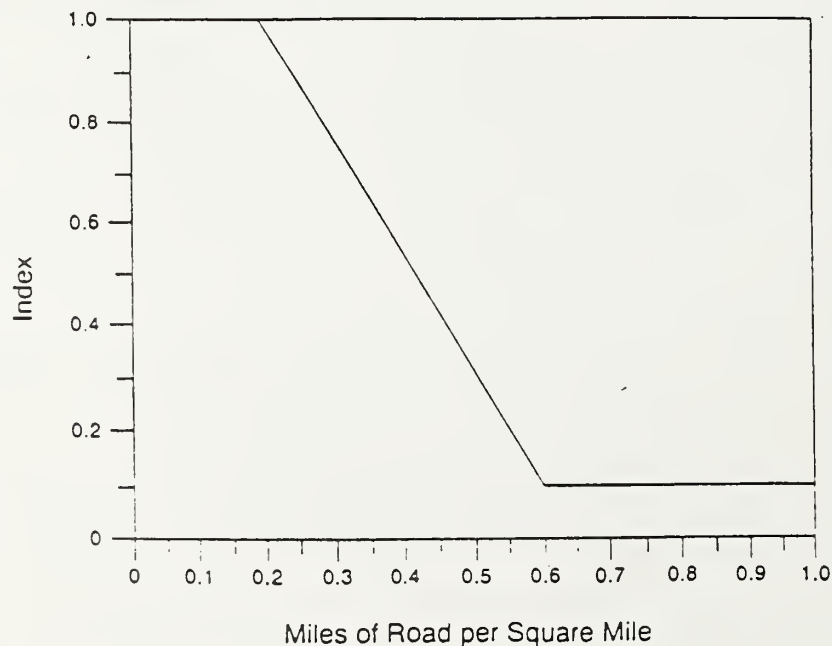
Suring, L., G. Degayner and R. Griffen. November 30, 1989

Table G-1 displays the variables used in each MIS habitat capability model. A description of each variable is provided in Table G-2.

The original authors of some of the habitat capability models included variables that were not incorporated into the GIS versions used for the Kelp Bay Project Area. The effects of patch size and disturbance were not included in the computer macros that were written because of the difficulty of applying these concepts to the GIS data base. The effects of patch size and disturbance are illustrated in the following tables and figures for the applicable MIS.

Figure G-1

Hypothetical Effect of Road Density on the Capability of Habitats to Support Marten without Adequate Safeguards to Prevent Overharvesting



Source: Suring et al 1988

Table G-1
Variables Used in the Wildlife Habitat Capability Models by Species

Species	SNOW	FTYPE	CNS	NFCN	FPROD	CT	VOLC	SSIZEC	ELEV-RNC	ASPECT	SMJ	LAKEBUFF	FISH-HAB	ESTUARY	BEACH	CLIFF
Sitka Black-tailed Deer	X	X	X		X		X	X	X	X		X				X
Mountain Goat		X		X	X	X	X	X	X	X						
Brown Bear			X	X	X	X		X	X					X		
Red Squirrel		X	X	X	X	X	X	X	X							
Otter		X	X		X			X	X			X		X		
Harten		X	X		X		X	X	X					X		
Brown Creeper		X					X	X	X							
Red-breasted Sapsucker		X			X		X	X	X							
Hairy Woodpecker		X					X	X	X							
Vancouver Canada Goose							X	X	X		X					
Bald Eagle		X			X		X	X	X			X		X		X

Source: Weber 1990.

Table G-2
Description of Habitat Capability Model Variables

ITEM	DESCRIPTION	VALID CODES	CODE DESCRIPTION	GIS DATA LAYER SOURCE
SMU	Soil Mapping unit	6 places	see data dictionary	CLU
SSIZEC	Timber Size Class	1 2 3 4 ' '	Seedling or Saplings; under 5" DBH Poletimber; DBH 5" to 9" Young-growth Sawtimber; 9"+ but LT 150 Yrs Oldgrowth Sawtimber; 9"+ and over 150 yrs Nonforested lands	TIMTYP
RIP-SOIL	Riparian Soil	0 5 7 8	Not a riparian/Mass Move. polygon Chantyp not available Riparian soil polgon Mass Movement polygon	RIPARIAN 1.1.1
ASPECT ²	Aspect	1 2 3 4 4 5 0	46 - 135 degrees 136 - 225 degrees 226 - 315 degrees 0 - 45 degrees 316 - 360 degrees unknown flat	ASPECT 4.5.B
(Aspect-Code)				
BEACH	Beach 500 ft buffer	0 1	Not within 500 ft buffer Within 500 ft buffer	BEACH 1.1.1
ELEV-RNG	Polygon Elevation	1 2 3 4 5 6	0-500 ft. 501-800 801-1200 1201-1500 1501-2000 2001-5000	ELEVATION 4.5.B MODIFIED FOR TLMP TO 1.1.1
VOLC	Timber Volume Class	3 4 5 6 7 ' '	0 to 8 MBF/acre 8 to 20 MBF/acres 20 to 30 MBF/acre 30 to 50 MBF/acre Greater than 50 MBF/acre 0 to 8 MBF/acre	TIMTYP 1.1.C
FISH-LAB	Redefine of Riparian Attributes In this order, each a 1.1.1		INTER AHMU-CLASS RIP-SOIL SOIL-AHMU Not surveyed	RIPARIAN 1.1.1
		5555		

Table G-2 (Continued)
Description of Habitat Capability Model Variables

ITEM	DESCRIPTION	VALID CODES	CODE DESCRIPTION	GIS DATA LAYER SOURCE
NFCON	Nonforest Condition Class	A	Alder Brush	TIMTYP
		B	Brush, other than Alder	
		C	Census Freshwater	1.1.C
		D	Sand Dunes	
		F	River Fill	
		G	Natrual Grassland	
		H	Alpine	
		I	Ice/Snow field	
		L	Uplifted Beach	
		M	Muskeg Meadow	
		N	Noncensueus Freshwater	
		O	Other	
		P	Borrow Pit	
		R	Rock	
		S	Slide Zone	
		T	Willow	
		U	Urban	
		W	Mass Wasting	
		X	Salt Water	
			Not Nonforested	
FPROD	Forest Productivity	2	Productivity GT 20 CU FT/acre	TIMTYP
		A	Low Productivity Due to Alder	
		G	Low Productivity Due to Glacier	1.1.C
		H	Low Productivity Due to High Elevation	
		L	Low Productivity Due to Low Site Index	
		M	Low Productivity Due to Muskeg	
		R	Low Productivity Due to Rock Cover	
		S	Low Productivity in Recurrent Slide Zone	
		T	Low Productivity Due to Willow	
FTYPE	Forest Type	A	Red Alder	TIMTYP
		B	Birch	.
		C	Cedar	1.1.C
		H	Hemlock	
		L	Lodgepole	
		M	Black Spruce	
		P	Black Cotton Wood	
		Q	Aspen	
		S	Spruce	
		W	White Spruce	
		X	Hemlock-spruce	

Table G-2 (Continued)
Description of Habitat Capability Model Variables

ITEM	DESCRIPTION	VALID CODES	CODE DESCRIPTION	GIS DATA LAYER SOURCE
INTER	Riparian Intersection	0	not an intersection	RIPARIAN
		1	intersection of stream buffer and riparian soils polygon.	1.1.I
LAKE-BUFFER		0	Not in lake buffer	
		1	Within <=5 acres buffer	
		2	Within 6 to 50 acre buffer	
		3	Within >50 acre buffer	
		4	Within <=5 acres lake	
		5	Within 6 to 50 acre lake	
		6	Within >50 acre lake	
ESTUARY	Land adjacent to Estuary	8	Area not inventoried	
		0	Not Esturaine	ESTURAINED
		1	Esturaine	
		8	CLU layer not available	1.1.I
CNS	Current Nonstocked Condition	A	Nonstocked Due To Alder	
		F	Nonstocked Due To Fire	
		G	Nonstocked Due To Water Or Glacier Action	
		I	Nonstocked Due To Insects	
		N	Nonstocked Due To Logging GTR-OR-EQ 5 Yrs	
		O	Nonstocked Due To Other Causes	
		P	Planned For Harvest By June 1988.	
		R	Nonstocked Due To Riverfill	
		S	Nonstocked Due To Slides	
		T	Nonstocked Due To Willow	
		U	Nonstocked Due To Beach Uplifting	
		W	Nonstocked Due To Windthrow	
		X	Nonstocked Due To Logging Less Than 5 Years	
T	Forest Cover-Type	F	Forest Cover Type	
		N	Nonforest Cover Type	
		O	GT 40 Acre Polygon Inserted By INSERTSHORE	
SOIL-AHMu	AHMu Class For Riparian Soils.	0	Neither AHMu class 1 or 2	RIPARIAN
		1	AHMu 1	
		2	AHMu Class 2 or 3	1.1.I
		5	Chantyp not available	
AHMu-CLASS	Aquatic Habitat Managment Unit Class (within buffer)	0	Not within an AHMu class	RIPARIAN
		1	Within AHMu class 1	
		2	Within AHMu class 2 or 3	1.1.I
		5	Channel Type not available	

Table G-2 (Continued)
Description of Habitat Capability Model Variables

ITEM	DESCRIPTION	VALID CODES	CODE DESCRIPTION	GIS DATA LAYER SOURCE
CLIFF	Area Within cliff buffers	0 (0) ³	Not Within Cliff Buffer	CLIFF
		8 (1)	tile not buffered	
		13 (3)	Within the 1300' buffer	2.2.1
		26 (6)	Within the 2600' buffer	
SNOW	Snow Depth Rating	1	mild	1.1.1
		2	moderate	
		3	deep	
		4	very deep	

Table G-3
Effects of Development and Human Activity on the Habitat Capability for
Brown Bear in Southeast Alaska

Type of Development or Activity	Habitat Capability Reduction (in percent) within Two Influence Zones	
	less than one mile	one to five miles
<i>Communities:</i>		
Greater than 1,000 people	100	70
501-1,000 people	100	50
11-500 people	70	40
Less than 10 people	50	20
Landfill - no effective incineration	100	50
F. S. Cabin/Developed Campground	20	0
Permanent Camp Site	80	50
Temporary Camp Site	50	20
Access Point (airstrip, dock, floatplane lake)	20	0
Mainline Roads with Ferry Access or Towns	60	30
Secondary Roads with Vehicle Access	40	10
Roads Closed Administratively	20	0
Roads Closed Permanently	10	0

Source: Schoen et al. 1989.

Table G-4

Effects of Disturbance on the Habitat Capability for Mountain Goats in Southeast Alaska

<i>Type of Human Access or Development</i>	<i>Habitat Capability Reduction (in percent)</i>
FS Cabin/Developed Campground/Seasonal Camp within one mile of occupied habitat	10
Permanent Camp Site/Residence/Float Camp within one mile of occupied habitat	40
one to five miles from occupied habitat	10
Access Point (airstrip, dock, floatplane lake) within one mile of occupied habitat	10
Road Accessible to Vehicles within two miles of occupied habitat	20
Transportation Link (ferry access/town) within two miles of occupied habitat	40
Trails or Road Access Limited to Hiking within two miles of occupied habitat	10

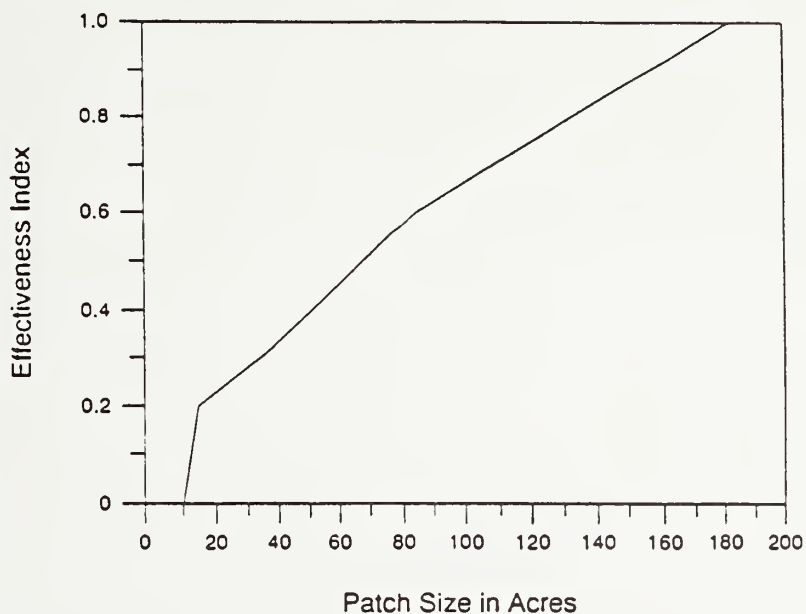
Source: Suring et al. 1988

Figure G-2
Effect of Patch Size on the Suitability and Capability of Habitats to Support Brown Creepers



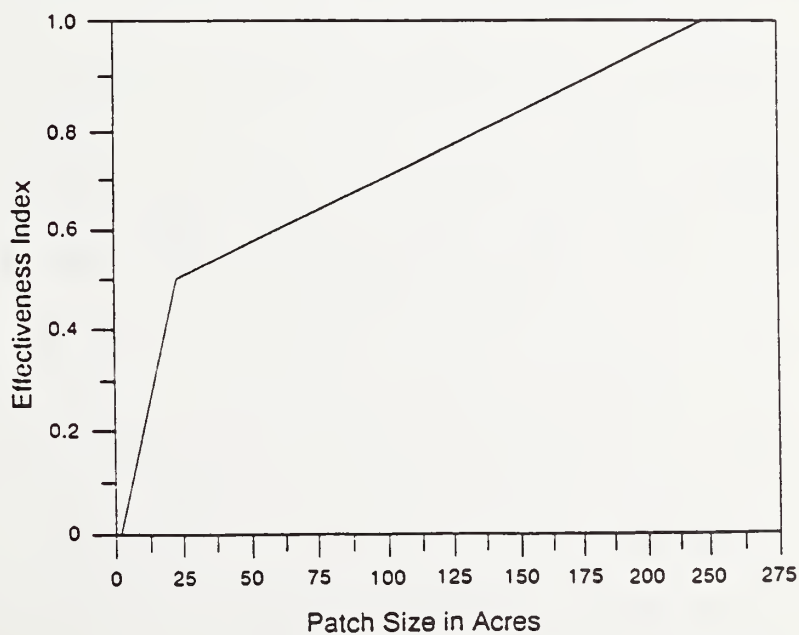
Source: Suring et al. 1988

Figure G-3

Effect of Patch Size on the Suitability and Capability of Habitats to Support Marten

Source: Suring et al. 1988

Figure G-4

Effect of Patch Size on the Suitability and Capability of Habitats to Support Red-Breasted Sapsuckers

Source: Suring et al. 1988

Figure G-5
Effect of Patch Size on Deer Habitat

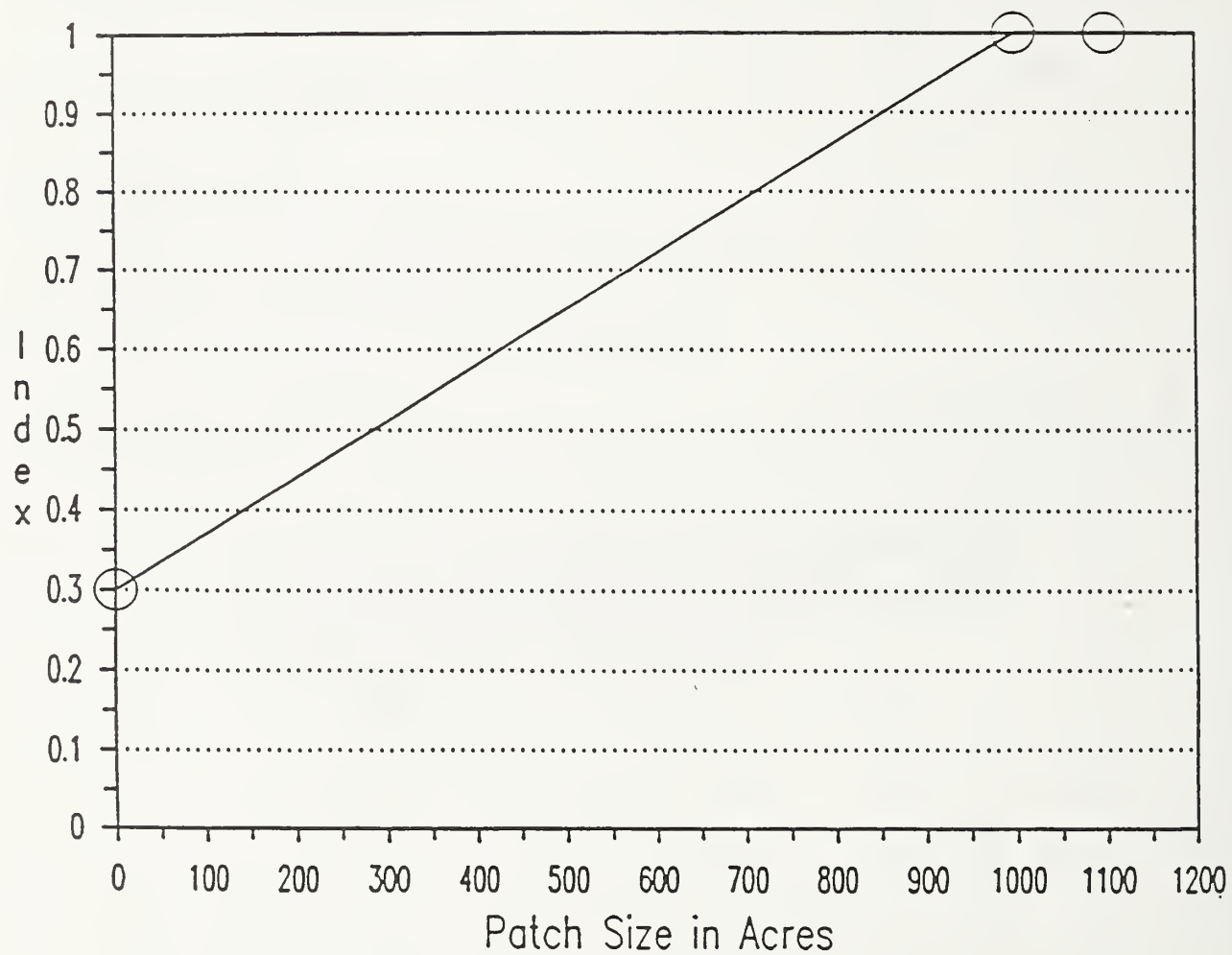
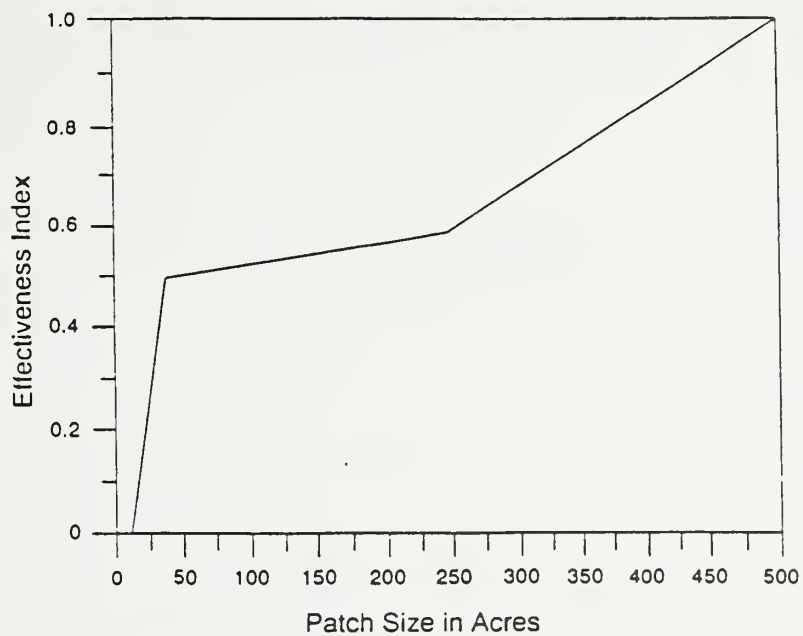


Figure G-6

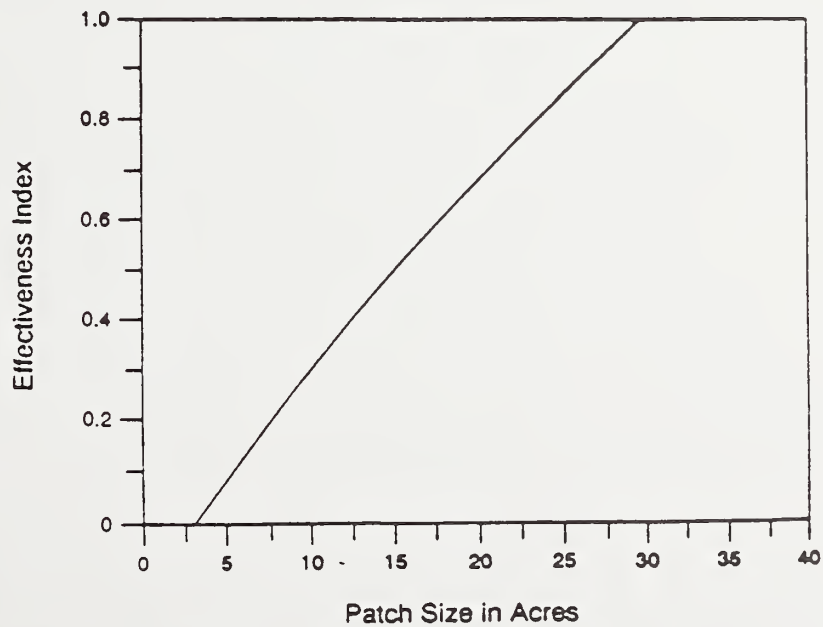
Effect of Patch Size on the Suitability and Capability of Habitats to Support Hairy Woodpeckers



Source: Suring et al. 1988

Figure G-7

Estimated Effect of Patch Size on the Suitability and Capability of Habitats to Support Red Squirrels



Source: Suring et al. 1988



Appendix H

Log Transfer Facilities



Appendix H

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3. Evaluation of LTF Alternatives Based on 404(b)(1) Guidelines	23



Report of Field Investigations



U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Protected Resources Management Division
Juneau, Alaska

and

U.S. Department of the Interior
Fish and Wildlife Service
Southeast Alaska Ecological Services
Juneau, Alaska

Report of Field Investigations
Tenakee Inlet (Inbetween, Saltery Bay, Crab Bay) and Peril
Strait (Oly Creek) Chichagof Island

October 28-31, 1991

In response to a request from Mr. Ted Allio, Chatham Area, USDA Forest Service (USFS), personnel from the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (FWS) investigated, in concert, the intertidal/subtidal habitats of locations in Tenakee Inlet and Peril Strait, Figure 1, for proposed log transfer facilities (LTF). Copies of aerial photographs of the proposed LTF sites are shown in Appendix A.

Over the years the timber industry has employed the technique of placing logs in marine waters, constructing log rafts, storing the rafts, and towing rafts to processing centers. While not always obvious, a significant bark loss results from such activities. What happens to the dislodged bark is dependent on numerous variables, but most often bark is found to accumulate in areas of high log handling activity in quantities sufficient to smother bottom dwelling organisms. The effects of such losses can be reflected through the food chain.

There are two approaches to lessening the harmful effects of concentrated bark deposits: (1) to select sites where prevailing features or conditions will facilitate bark dispersal, and (2) to select sites which display relatively low biological resource value. Our site selection techniques are designed to consider each approach, and where possible, identify sites which satisfy criteria for both.

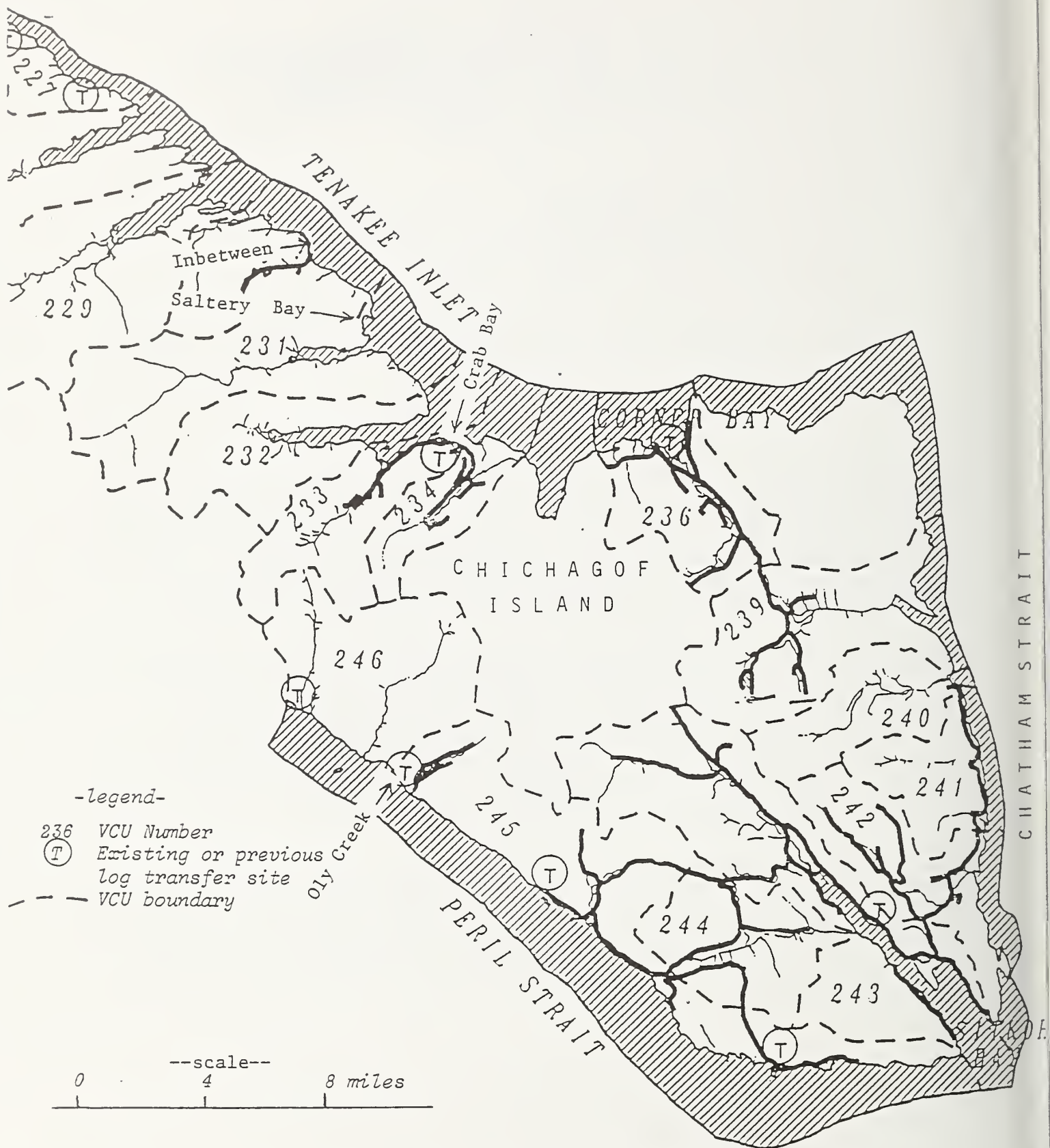


Figure 1. Proposed Log Transfer Facility Sites in Tenakee Inlet and Peril Strait. Reproduced from "Southeast Chichagof Project Area Scoping Information," USFS, 1991.

OBJECTIVES

Investigations were directed at achieving the following study objectives:

1. Investigate subtidal habitat at potential log transfer sites to determine a) the physical characteristics including depth, slope, substrate, and current patterns; and b) the biological characteristics of productivity and diversity.
2. Analyze information collected on each site, and compare results both with the Timber Task Force log transfer facility siting guidelines¹ and with results on other nearby sites.
3. Present a recommendation relative to the use of the investigated sites for log transfer activities.

METHODS

A transect line, 100-meters long, was extended seaward from the proposed site perpendicular to the shoreline. Self Contained Underwater Breathing Apparatus (SCUBA) was employed to gather intertidal/subtidal information along the transect line as well as in the general area of potential impact. Observations of physical and biological characteristics were made at five-meter intervals along the transect line. Observations included water depth, substratum composition, plant species, animal species, and obvious changes in zonation. In addition, the general characteristics of the area, and evidence of current flow patterns, or the lack thereof, were noted subjectively.

RESULTS AND RECOMMENDATIONS

A discussion for each area investigated follows. Species observed in each area are listed in Table 1.

Inbetween (Tenakee Inlet)

The underwater investigation occurred about 100 meters west of the reef and about 50 meters west of the old breakout point access road. Previous use of the area for log transfer occurred during the time period ca 1985-86. A bundling rack was used for log transfer. Log rafting occurred in deeper waters (20 feet and deeper) off the investigated site.

¹1985, Log Transfer Facility Siting, Construction, Operation and Monitoring/Reporting Guidelines, Governor's Timber Task Force.

A bottom profile of the transect is shown in Figure 2. The physical attributes of the site are characterized as being very shallow (2.4 meters at the deepest) with a pebble/cobble bottom from the high tide line to 50 meters from shore giving way to a sand/silt bottom to the end of the transect. Flushing potential is moderate as evidenced by the presence of silt within the bottom composition.

Animal and plant species observed were those common to this type of habitat. Species variety was low with sea anemones (Anthopleura spp), worms (Owenia fusiformis), barnacles (Balanus spp), and mussels (Mytilus edulis) being most abundant. The two most abundant algae species noted were Fucus spp and Enteromorpha spp. Eelgrass (Zostera marina) occurred 72 meters from shore to beyond the end of the transect.

This site does not meet the Timber Task Force LTF siting guidelines, including the criteria for water depth, site productivity, and potential bark accumulation. Therefore, an underwater reconnaissance seaward of the transect and of the area toward and in front of the reef was made. An extensive band of eelgrass extended beyond the transect line an estimated 50-75 meters to a depth of 6.1 meters where a large area of woody debris extended east and west and seaward into deeper waters. The area just west of the reef was composed of a silt/sand/rock substratum with a sparse growth of algae. The most abundant animals were the sea pen (Ptilosarcus gurneyi), sea peach (Halocynthia spp), and Owenia fusiformis. Evidence of Dungeness crab was noted in the silt/sand slope. One small tanner crab was seen.

An investigation of the exposed reef indicated that it could be used as an avenue to reach deeper water which would allow woody debris to settle on less productive bottom habitat. We, therefore, recommend the reef area be used as the LTF with the structures removed after completion of logging. Any small independent log sales could use bundling racks west of the reef as was done previously with log rafts stored in waters deeper than 40 feet when measured from mean lower low water.

Saltery Bay, (Tenakee Inlet)

A bottom profile of the transect is shown in Figure 3. The physical attributes of the site are characterized as a moderate slope of bedrock to about 20 meters from the high tide line giving way to a boulder/cobble bottom to about 30 meters from shore grading into a silt/sand/cobble bottom to the end of the transect. Flushing potential is low as evidenced by the presence of a silty bottom. Depth at the end of the transect was about nine meters.

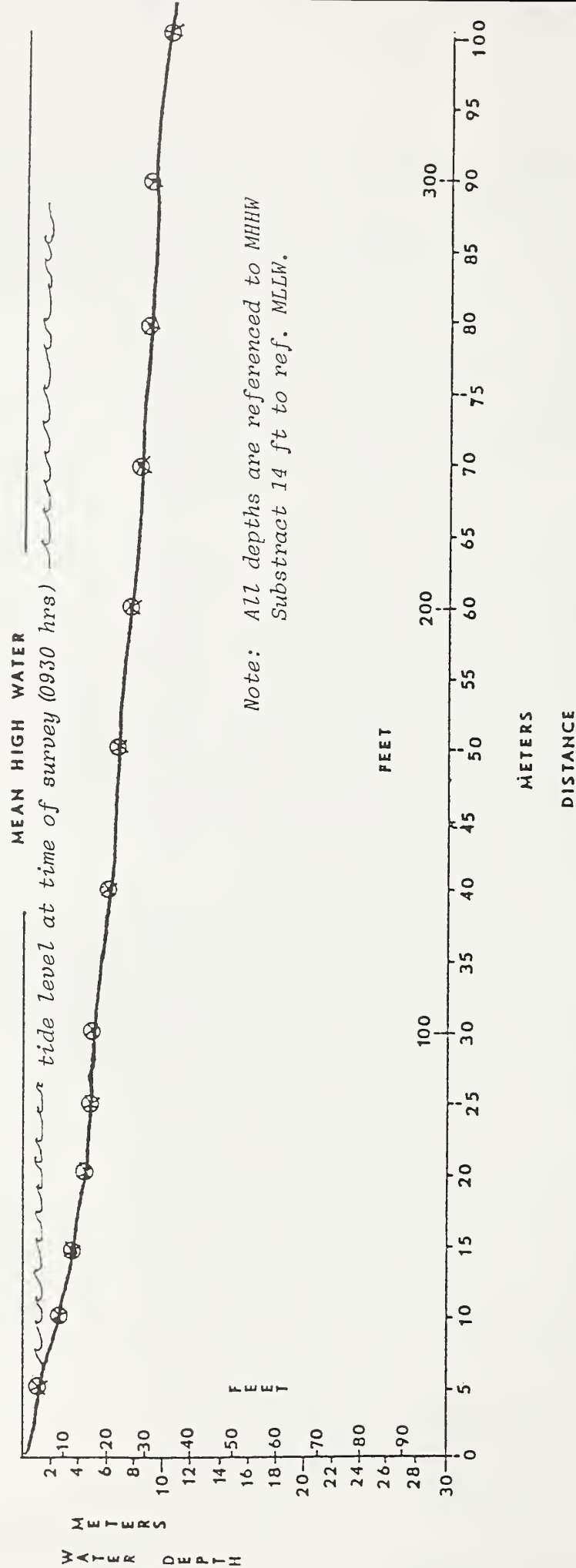


Figure 3. Dive Transect Depth-Distance Profile at Proposed Log Transfer Facility near Sallery Bay in Tenakee Inlet, Alaska (10-30-91).

Animal and plant species observed were those common to this type of habitat. Species variety was low with borrowing worms (Owenia fusiformis), sea cucumbers (Parastichopus californicus) and starfish (Dermasterias imbricata, Pycnopodia helianthoides) being most abundant. The two most abundant algae species noted were Desmarestia spp and Laminaria spp. Eelgrass (Zostera marina) occurred from 21 to 37 meters from shore and again beyond the transect. Borrowing worms Owenia fusiformis were abundant and are a significant component of the total biomass seen at the site. Commercial quantities of sea cucumbers were also noted in the area. The large macrophyte Laminaria will cover the bottom during the spring and summer periods.

This site does not meet the Timber Task Force LTF siting guidelines, including the criteria for water depth, site productivity, and potential bark accumulation. We recommend this site not be used for the transfer of logs if a deeper less productive alternative location is available.

Crab Bay (Tenakee Inlet)

The site is exposed. It is also the site of an old transfer facility used during the time period ca 1977-79. The facility is in disrepair and unusable without reconstruction. A bottom profile of the transect is shown in Figure 4. Physical attributes of the site are characterized as being very flat and shallow (4.5 meters at the end of the transect). No evidence of woody debris was noted; the only evidence of past transfer activity was the presence of a few metal bands along the transect. The substratum was composed of boulder/cobble to about 20 meters from the high tide line which graded into a sand/cobble/boulder bottom to the end of the transect. A fairly strong current was flowing west to east and will disperse most woody debris from the area.

Plant and animal species were abundant and typical for a rock/sand bottom. Laminaria spp, Desmarestia spp, and Costaria costata were abundant on rock surfaces as well as the red algae Palmeria spp and Lithothamnion spp. The site is quite productive with high diversity and biomass. Filter feeders (Metridium senile and Serpula vermicularis) were abundant as were the starfish (Pycnopodia helianthoides and Evasterias troschelii). Juvenile king crab, pandalid shrimp, and octopus were noted amongst the boulder/cobble substratum.

This site fails to meet the Timber Task Force LTF siting guidelines, including the criteria for water depth and site productivity. However, the site has recovered well from the effects of past log transfer activities. The alternative of siting a facility within Crab Bay would have a longer lasting effect on the marine environment. Debris would settle and

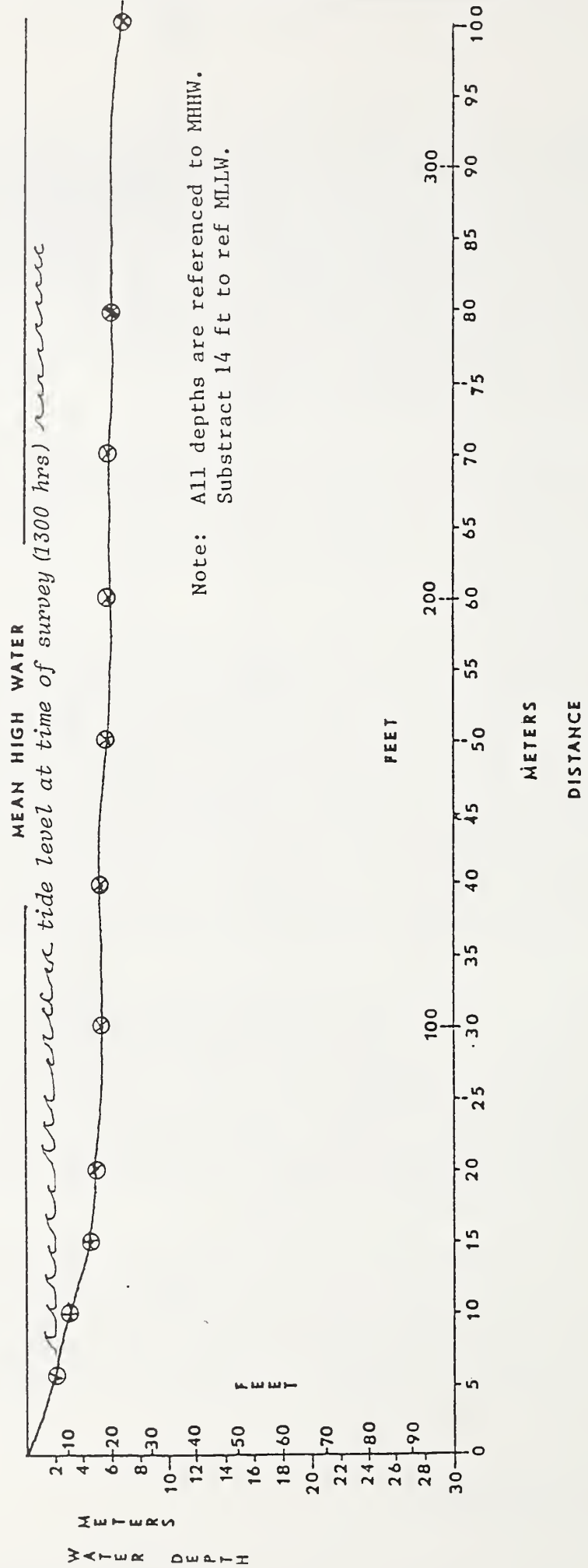


Figure 4. Dive Transect Depth-Distance Profile at Crab Bay Log Transfer Facility in Tenakee Inlet, Alaska (10-30-91).

accumulate in a defined area rendering the area less productive for a longer period of time.

We recommend the old site be selected for reuse as a log transfer facility using the same method of log transfer.

Oly Creek, (Peril Strait)

The site is exposed and adjacent to an anadromous fish stream. It is also the site of an old transfer facility used during the time period of ca 1974-76. The facility is in disrepair and unusable without reconstruction. This site was not investigated with SCUBA. A boat reconnaissance revealed the physical attributes of the site as being very flat and shallow to about two hundred meters from shore. An alternative location about 500 meters west of the old LTF was selected and investigated with the use of SCUBA. A bottom profile of the transect is shown in Figure 5.

The transect began at a bedrock outcrop about 500 meters west of the old LTF. Physical attributes of the site are characterized as bedrock dropping sharply within 10 meters to a cobble/sand bottom grading into pure sand at about 20 meters to the end of the transect and beyond. Depth at the end of the transect line was about 23 meters. Slope dropped sharply beginning at 40 meters from the high tide line. A moderate current was running west to east.

The slope was sparsely vegetated. An 8-meter wide band of eelgrass started at 40 meters from the high tide line. Laminaria spp and Desmarestia spp were the dominant algae species along the transect. Dungeness crabs (Cancer magister), a commercially important species, were found buried in the sand along the transect. Animal species diversity was limited as few other invertebrates were noted.

This site meets the Timber Task Force Guidelines for siting of a LTF except for the presence of Dungeness crabs. However, the proposed transfer method is from land to barge without water entry. Thus, operation of the facility probably would not have a significant effect on Dungeness crab habitat.

CAVEAT

The recommendations of the proposed sites indicated as suitable for LTFs are based upon observations of estuarine habitat made during a limited time period. It should be noted that observations over time were not made and as a result, seasonal changes in habitat use, including fish and shellfish spawning occurrences were not observed. Further, recommendations offered relate to aquatic observations only. Use of adjacent uplands by animals or birds, including bald eagles, was not considered.

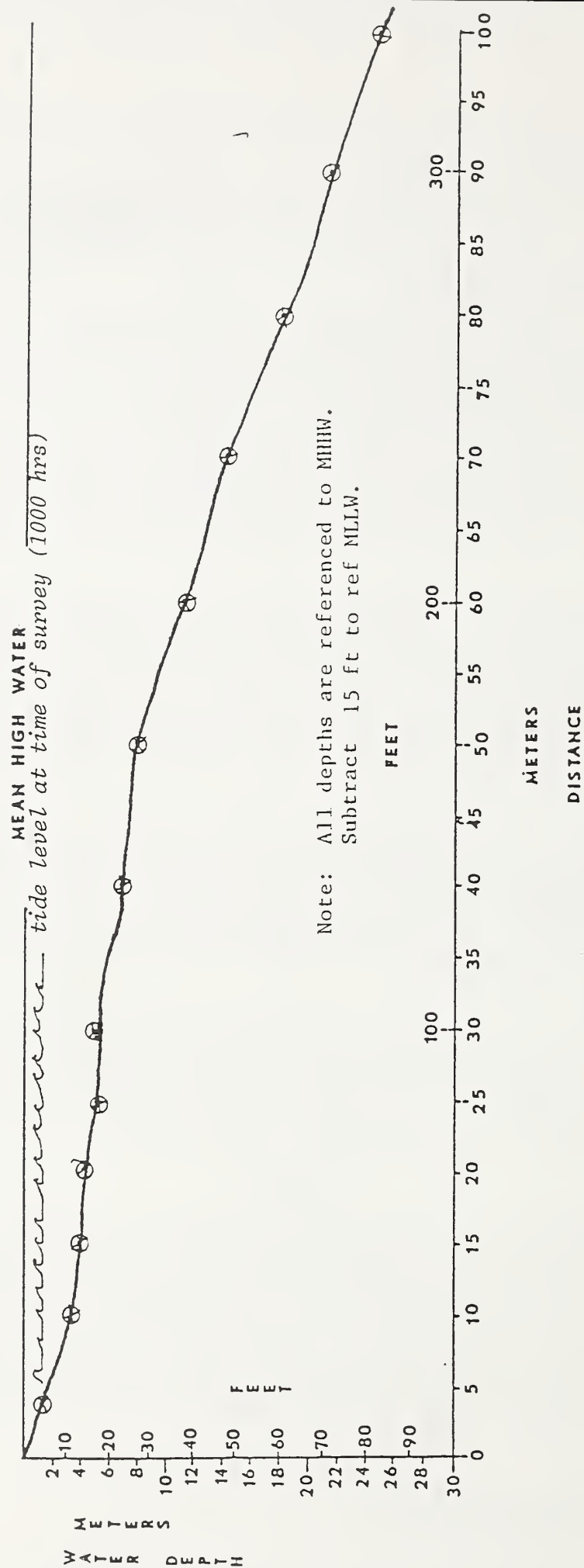


Figure 5. Dive Transect Depth-Distance Profile at Oly Creek Log Transfer Facility in Peril Strait, Alaska (10-31-91).

Table 1. List of plant and animal species observed along underwater transects at Inbetween (A), Saltery Bay (B), Crab Bay (C), and Oly Creek (D), October 29-31, 1991, a = abundant, m = typical, s = scarce, x = present.

Aquatic Plants	Common Name	A	B	C	D
<u>Costaria costata</u>	Brown algae		s	s	x
<u>Desmarestia spp</u>	Brown algae		x	m	s
<u>Enteromorpha spp</u>	Green algae	s	x	s	s
<u>Fucus spp</u>	Brown algae	s	x	s	s
<u>Laminaria spp</u>	Brown algae		m	m	s
<u>Lithothamnium spp</u>	Encrusting algae		x	m	
<u>Odonthalia spp</u>	Red algae	s			
<u>Palmeria spp</u>	Red algae		x	m	s
<u>Ulva/Monostroma spp</u>	Green algae			s	
<u>Zostera marina</u>	Eelgrass	a	x		s
Aquatic Invertebrates	Common Name	A	B	C	D
<u>Acmaea spp</u>	White cap limpet		s		s
<u>Anthopleura spp</u>	Anemone	s			s
<u>Balanus spp</u>	Acorn barnacles	s	m	m	s
<u>Boltenia villosa</u>	Stalked hairy tunicate			s	
<u>Cadlina luteomarginata</u>	Nudibranch	s			
<u>Cancer magister</u>	Dungeness crab				m
<u>Chlamys spp</u>	Pink scallop	s			
<u>Cliona celata</u>	Boring sponge	x			
<u>Dermasterias imbricata</u>	Leather star		m	a	
<u>Elassochirus tenuimanus</u>	Big-clawed hermit crab		s		s
<u>Evasterias troschelii</u>	Molted star	x	s	s	s
<u>Fusitriton oregonensis</u>	Oregon triton	s			
<u>Haliclona spp</u>	Volcano sponge			x	
<u>Halocynthia aurantium</u>	Sea peach	a			
<u>Henricia leviuscula</u>	Blood star	s			
<u>Hyas lyratus</u>	Lyre crab		s		
<u>Melibe leonina</u>	Lion nudibranch		s		s
<u>Metridium senile</u>	Fine-tentacled anemone		s	a	
<u>Microporina borealis</u>	Jointed bryozoan			m	
<u>Mytilus edulis</u>	Blue mussel	m	s		s
<u>Octopus dofleini</u>	Pacific octopus			x	
<u>Oregonia gracilis</u>	Decorator crab		s		
<u>Owenia fusiformis</u>	Polychaete (worm)	a	a		
Pandalid shrimp				m	x
<u>Pagurus spp</u>	Hermit crab		s	s	
<u>Paralithodes camtschatica</u>	King crab			x	
<u>Parastichopus californicus</u>	Mop sea cucumber	s	a		
<u>Pododesmus macroschisma</u>	False pacific jingle		s	s	
<u>Ptilosarcus gurneyi</u>	Sea pen	s			

Table 1. (Continued) List of plant and animal species observed along underwater transects at Inbetween (A), Saltery Bay (B), Crab Bay (C), and Oly Creek (D), October 29-31, 1991, a = abundant, m = typical, s = scarce, x = present.

<u>Aquatic Invertebrates</u>	<u>Common Name</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
<u>Pycnopodia helianthoides</u>	Sunflower star		m	m	s
<u>Serpula vermicularis</u>	Common serpulid		m	m	
Snail		x		s	s
<u>Spirorbis spp</u>	Coiled serpulid		m		
<u>Strongylocentrotus droebachiensis</u>	Green sea urchin		s	s	
<u>Tonicella spp</u>	Chiton		s	s	
<u>Marine fish</u>	<u>Common Name</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
<u>Myoxocephalus polyacanthocephalus</u>	Sculpin	x	x	x	

ACKNOWLEDGEMENTS

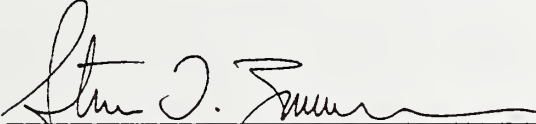
Duane Petersen, NMFS Juneau, Alaska, and Bill Hughes, FWS Sitka, Alaska, were the principle investigators for these field investigations and were responsible for preparation of this report.

Ted Allio and Cindy Hartmann, USFS Sitka, Alaska, represented the USFS. Howard Ulrich, USFS Sitka, Alaska, served as skipper aboard the USFS vessel M/V Sitka Ranger.

NATIONAL MARINE FISHERIES SERVICE

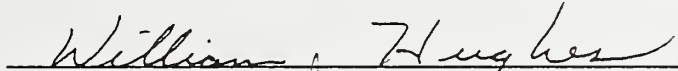


Duane H. Petersen, diver/biologist



Steven T. Zimmerman Ph.D, Chief
Protected Resources Management Division

U.S. FISH AND WILDLIFE SERVICE

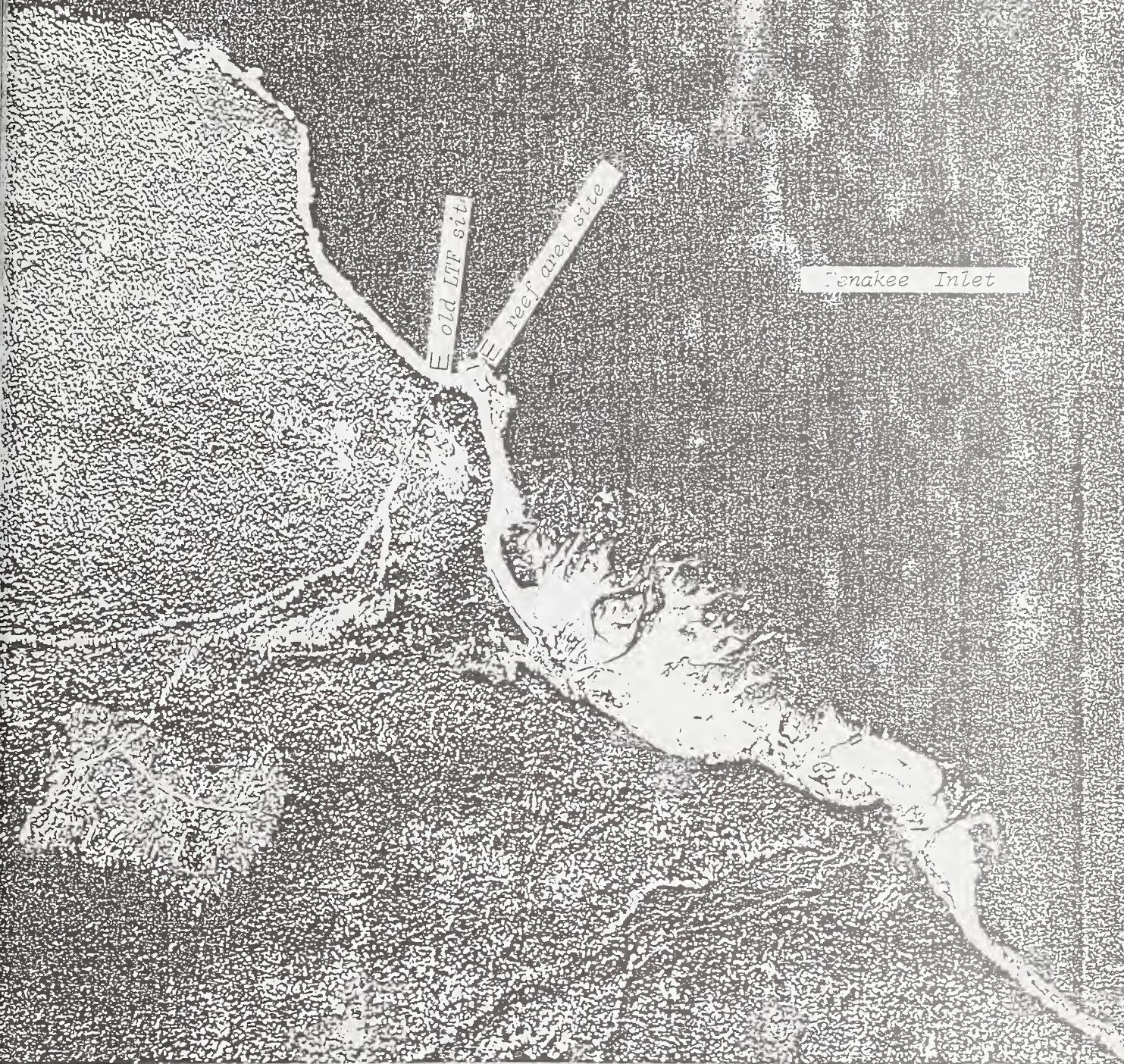


William A. Hughes, diver/biologist



Nevin D. Holmberg, Field Supervisor
Ecological Services, Juneau

Appendix A. Aerial Photographs of Proposed Log Transfer Facility Sites.

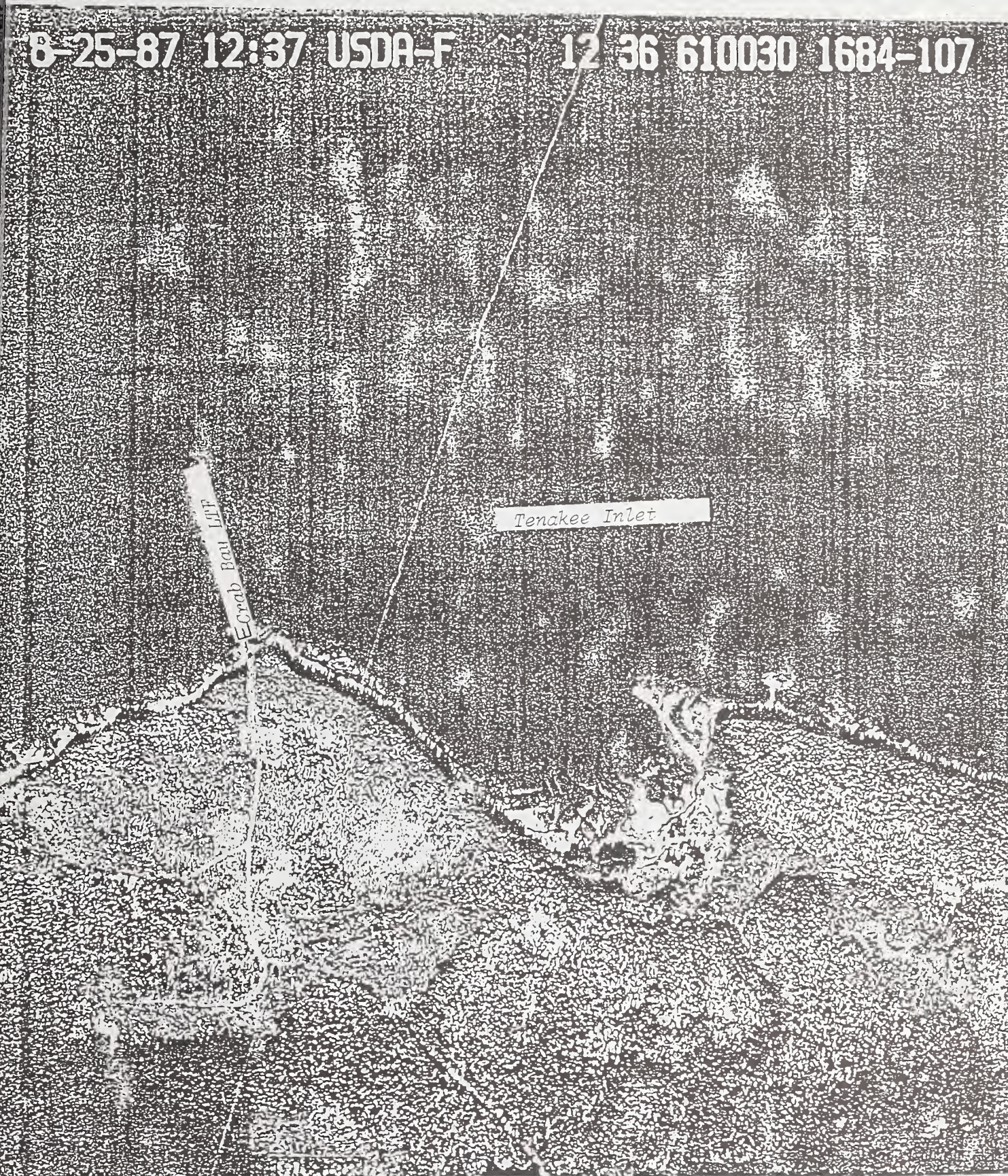


Appendix A-1 . Inbetween proposed LTF sites.

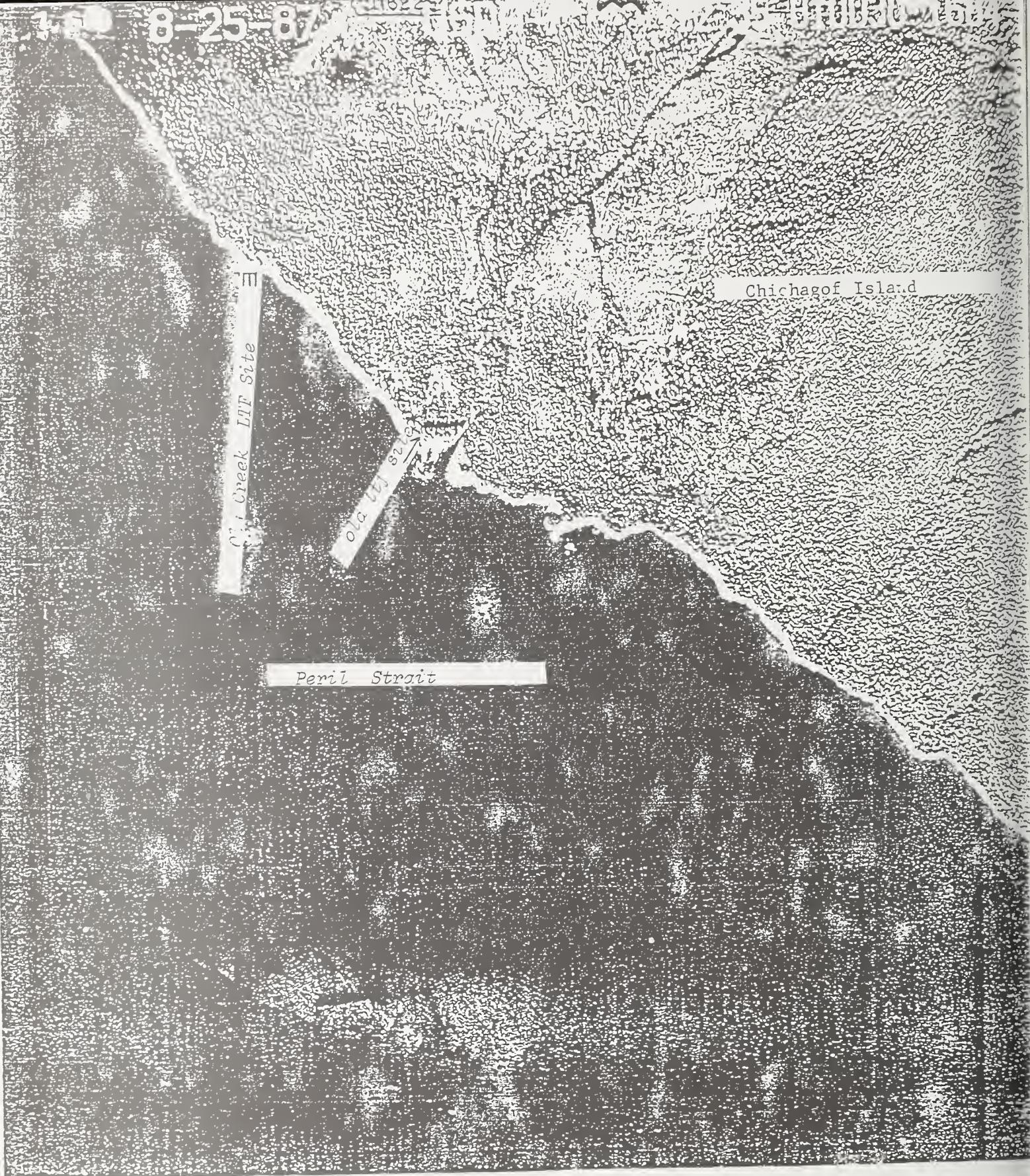
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Appendix A-2. Saltery Bay proposed LTF site.



Appendix A-3. Crab Bay proposed LTF site.



Appendix A-4. Oly Creek proposed LTF site.

Comparison of Log Transfer Sites



LTF Siting Guidelines

1. Proximity to Rearing and Spawning Areas: Siting of log transfer and log raft storage facilities within 300 feet of the mouths of anadromous fish streams, or in areas known to be important for fish spawning or rearing, is normally prohibited.
2. Protected Locations: Log transfer and log raft storage facilities should be sited in weather-protected waters with bottoms suitable for anchoring and with at least 20 acres for temporary log storage and log booming.
3. Upland Facility Requirements: Log transfer facilities generally should be sited in proximity to at least 5 acres of relatively flat uplands. There should also be a body of water sufficient to provide a minimum of 60 lineal feet of facility face.
4. Safe Access to a Facility from the Uplands: To provide safe access to the log transfer facility and adjoining log sort yard, the facility should be sited where access roads to the facility can maintain a grade of 10 percent or less for trucks and 4 percent for specialized equipment.
5. Bark Dispersal: Log transfer facilities should be sited along or adjacent to straits and channels or deep bays where currents may be strong enough to disperse sunken or floating wood debris. Siting log transfer facilities in embayments with sills or other natural restrictions to tidal exchange should be avoided.
6. Site Productivity: Sites for in-water storage and/or transfer of logs should be located in areas having the least productive intertidal and subtidal zones.
7. Sensitive Habitat: Log transfer facilities and log raft storage areas should not be sited on or adjacent to (i.e., near enough to affect) extensive tideflats, salt marches, kelp or eelgrass beds, seaweed harvest areas, or shellfish concentration areas.
8. Safe Marine Access to Facilities: Log rafting and storage facilities should be safely accessible to tug boats with log rafts at most tides and on most winter days.
9. Storage and Rafting: Logs, log bundles, and log rafts should be stored in areas where they will not ground at low tide. A minimum depth of 40 feet or deeper measured at mean lower low water (mllw) for log raft storage is preferred.
10. Avoid Bald Eagle Nest Trees: Site log transfer facilities to avoid bald eagle nests. No project construction or operations should be closer than 330 feet to any bald eagle nest tree.

Comparison of Log Transfer Sites Based on LTF Guidelines under 404(b)(1)

VCU	LTF Name	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
230	Inbetween	+	-	+	-	+	+	+	+	+	-
233	Crab Bay	+	+	+	+	+	-	+	+	-	+
236	Corner Bay	+	+	+	+	-	+	+	+	+	+
245	False Island	+	+	+	+	+	+	+	+	+	+
246	Oly Creek	+	-	+	+	+	+	+	+	+	+

Note: + Indicates LTF meets guideline.
- Indicates LTF does not fully meet the guideline.

Evaluation of LTF Alternatives Based on 404(b)(1) Guidelines



Evaluation of Log Transfer Facilities Using 404(b)(1) Guidelines of the Clean Water Act.

Guidelines governing siting, construction, operation and monitoring of log transfer facilities under 40 CFR 230.12(a)(3) read as follows:

V. Log Transfer Facilities Siting, Construction, Operation, and Monitoring

A. Site log transfer facilities in locations which will best avoid or minimize potential impacts on water quality, aquatic habitat and other resources. During site analysis, cooperate with State and Federal agencies per stipulations in Memoranda of Understanding or cooperative agreements to assemble required data and evaluate alternatives.

Evaluate alternatives using the 404(b)(1) guidelines to determine if “(i) There is a practicable alternative to the proposed discharge that would have less adverse effect on the aquatic ecosystem, so long as such alternative does not have other significant adverse environmental consequences; or (ii) the proposed discharge will result in significant degradation of the aquatic ecosystem; or (iii) The proposed discharge does not include all appropriate and practicable measures to minimize potential harm to the aquatic ecosystem; or (iv) There does not exist sufficient information to make a reasoned judgment as to whether the proposed discharge will comply with these Guidelines.

Log transfer facilities proposed under the various action alternatives for the Southeast Chichagof Project were evaluated on the basis of items i through iv noted above. That evaluation follows.

PROPOSED LTF: OLY CREEK LTF

Evaluation of Alternatives

(i) There is a practicable alternative to the proposed discharge that would have less adverse effect on the aquatic ecosystem, so long as such alternative does not have other significant adverse environmental consequences

Description

Proposed acres of tentatively suitable harvested under the Southeast Chichagof FEIS preferred alternative = 704 acres tributary to this LTF.

Acres of tentatively suitable remaining after Southeast Chichagof FEIS = 5,237 acres tributary to this LTF. Table 3-5 Southeast Chichagof FEIS.

Alternatives to the Proposed LTF

Road connection along the beach to False Island LTF ^{1/}

Road Connection over a pass to Crab Bay LTF (presumes permitting of Crab Bay LTF) ^{2/}

Temporary LTFs installed at or near Broadfinger Creek and Broad Creek and do not build road between LTFs.(temporary slide out ramp type) ^{3/}

No-Action Alternative—no harvest of timber in the vicinity of Oly Creek

Sub-alternatives at Oly Creek for transfer of logs.

Bulkhead and barging (location and exposure preclude rafting of logs) ^{4/}

“Slide-out ramp” suggested by APC for use with small barges (logistics not developed for operations)

Pile-supported bridge with loading by barge mounted crane (Silver Bay or Haida Warrior) ^{4/}

Pile-supported bridge and loading to a small barge (logistics not developed for ramp and loading) ^{4/}

Evaluation Between Alternatives

Oly Creek LTF

Timber harvested tributary to this LTF would be from VCU 246; therefore, it does not require construction of 3.0 miles of road over 600 foot elevation pass to Crab Bay LTF.

Favorable haul direction (downhill)of timber in VCU 246 uses less fuel because of shorter haul distance vs Crab Bay LTF. Haul cost would be approximately \$280,000 less to Oly Creek LTF than to Crab Bay LTF.

VCUs 231, 232, 233, 234 timber volume (60 MMBF) hauled over the pass would use large amounts of fuel, longer haul; therefore, costs would be high. Haul season would be shortened by 2 months on the average over the hauling season at lower elevations because of snow on the 600-foot elevation pass. Logistics proposed for Oly Creek are for minimal facilities. Without Crab Bay, Oly Creek would need to be a much more extensive upland installation (8-10-acre sort and storage site) than for VCU 246 only (5-acre sort and storage yard).

Proposed logistics for log handling at Oly Creek are much more expensive. The Oly Creek barge is approximately \$500,000 compared to Crab Bay boat ramp/slide which is

approximately \$250,000. The supply curve for Tongass timber is very flat, and relatively small changes in costs make large differences in supply (706(b) Report 1992).

Crab Bay LTF Instead of Oly Creek

Does not require construction of a LTF at Oly Creek saving approximately \$250,000. Access road to the LTF of 2.0 miles would not be built, saving approximately \$260,000.

The 20-25 MMBF of timber volume in VCU 246 would be hauled uphill to the pass and a longer distance to Crab Bay. This would use more fuel and cost more (\$280,000 approximately). Shorter haul season (by approximately 2 months) because of the 600 foot pass which would get snow earlier and stay longer than on the lower elevation roads.

More timber volume would be passed through Crab Bay. Sort and storage yard would need to be expanded.

Crab Bay was identified by the Forest Service as a long-term site when originally constructed. Intent to reuse the site was implicit in the Tongass Land Management Plan and the Tongass Land Management Plan Revision process.

A road over the pass would be constructed if VCU 246 timber was hauled to Crab Bay LTF, affording passage through traffic from Peril Strait to Tenakee Inlet. There has been much public comment about this road and subsistence use during subsistence meetings. Tenakee residents do not want Sitka residents to have easier access to the Tenakee Inlet side of the pass and Sitka residents do not want Tenakee Inlet residents to have easier access to the Hoonah Sound side of the pass.

The pass route might be snow-plowed to increase haul season. This would result in an increased amount of fuel used and higher cost of haul for the timber in VCU 246. Snow plowing has the potential to move road surface sediments off the road with the snow into the ditches and finally into the streams when snow melt occurs.

Road Connection to False Island LTF Instead of Oly Creek LTF

The road is approximately 6.4 miles long, costing approximately \$350,000 more than the proposed barge site at Oly Creek. Also considered are attendant environmental effects such, as but not limited to, taking approximately 39 acres of land out of timber production because of the roadway, increased sediment during road construction, possible mass wasting into Peril Straits resulting from slides occurring as a result of large cut slopes on slopes that exceed 90 percent (approximately 1 mile), and the possible encroachment on three known eagle nest trees.

Approximately 2 miles of the road is beach road. There will be a visual impact on portions of the road which will be full bench rock cut with end haul of the excess rock. Portions will need

to be constructed on tidelands to avoid massive cuts and the possibility of mass failures on extremely steep (90%) side slopes.

Haul distance would be increased, increasing fuel consumption, haul cost (approximately \$180,000), and equipment and road maintenance.

Would not need to construct upland sort and storage yard at False Island since this was built under a previous plan.

Construct Temporary LTFs at Broad Finger Creek and Broad Creek Instead of the Oly Creek LTF

An LTF site at Broad Finger Creek identified in the 1978 dive report states it would take a large, expensive LTF to reach proper water depth to unload logs. This site is shallow and would require that a structure be built in excess of 100 meters out from the shoreline. APC-proposed sites have not been identified and no investigation has taken place.

A possible LTF site exists on the west side of Broad Creek. This needs more investigation before impacts can be weighed.

Would not need to construct 1.5 miles of road from Broad Creek LTF to Oly Creek LTF site. Would not need to construct approximately 2.0 miles of road between proposed Broad and Broad Finger LTF sites. The cost of the two LTFs would approximately offset the savings of road cost.

Difference in haul distance and fuel consumption between these site and Oly Creek would be negligible.

Both sites would require a minimum of 5-acre upland sites for sort and storage yard.

Size of or distance off-shore of these structures would have to reach to be able to load logs on a barge is unknown.

(ii) the proposed discharge will result in significant degradation of the aquatic ecosystem

Proposed LTF at OLY Creek

Only the bark that would fall off the log bundles as they are being transported from shore to the barge by a loader or stacker would be introduced to the aquatic ecosystem.

Surface runoff into the aquatic system can be kept to a minimum by complying with Best Management Practices (BMPs), sloping the access route and the LTF surface away from the water (insloping) into filter strips.

Dungeness crabs were found buried in the sand in this area but, because of the method of proposed log transfer, it is felt that there probably not be significant effects on the habitat (see Appendix H dive report).

100-meter transect beginning on shore running out in the water revealed the following. Beginning on a rock outcrop dropping sharply within 10 meters to a cobble/sand bottom grading to pure sand at about 20 meters to the end of the transect—depth at the end of the transect was 23 meters. The slope dropped sharply 40 meters out from the high tide line. An 8-meter-wide band of eelgrass was observed at 40 meters out from the high tide line (see Appendix H Dive Report).

(iii) The proposed discharge does not include all appropriate and practicable measures to minimize potential harm to the aquatic ecosystem

The sort yard will be constructed with BMPs using filter strips, road sloping to drain to filter strips, and weekly cleanup of bark and wood chunks. ^{5/}

The barge loading facilities will result in a minimal amount of incidental bark being discharged during the carrying and placement of log bundles.

Construction of a LTF and associated log storage and log sorting areas is selected to construction of a road between Oly Creek and Crab Bay. Subsistence concerns from the rural residents of both Sitka and Tenakee Springs expressed in the comments to the DEIS and during the subsistence hearings support this finding. Construction of the road is not practicable while meeting the needs of subsistence users.

PROPOSED LTF: CRAB BAY LTF

Evaluation of Alternatives

(i) There is a practicable alternative to the proposed discharge that would have less adverse effect on the aquatic ecosystem, so long as such alternative does not have other significant adverse environmental consequences

Description

Proposed acres of tentatively suitable harvested under the Southeast Chichagof FEIS Preferred Alternative = 1,443 acres tributary to this LTF.

Acres of tentatively suitable remaining after Southeast Chichagof FEIS = 12,624 acres tributary to this LTF. Table 3-5 Southeast Chichagof FEIS.

Alternatives to the Proposed LTF

Road connection over a pass to Oly creek (presumes permitting of Oly Creek LTF).

Reconstruction of the Crab LTF.

Road through Kadashan and use the existing Corner Bay LTF. This alternative was not analyzed under this Project because of a ongoing study of the Kadashan drainage in TLMP Revision.

Use LTF at Inbetween Creek (presumes Inbetween LTF is permitted).

No-Action Alternative of not harvesting timber in the Crab Bay area.

Sub-alternatives at Crab Bay for the transfer of logs.

Reconstruct as boat-ramp type LTF with rails.^{2/}

Reconstruct as low-angle slide LTF.^{2/}

Reconstruct as previously on-site steep angle slide.^{2/}

Evaluation Between Alternatives

Crab Bay LTF

Would need to be reconstructed because of the large volume (60 MMBF) of timber to be harvested in VCU's 231, 232, 233, 234 which are tributary to Crab Bay LTF. Hauling large volumes of timber over the pass to Oly Creek LTF would increase the fuel consumption and haul distance. There would also be a shorter hauling season because of the snow closing off the pass approximately one to two months earlier than in the lower elevation roads. Crab Bay has an existing log sort and storage yard that is overgrown with alder that will need to be cleared and shaped. Crab Bay LTF was identified by the Forest Service as a long-term site when originally constructed. The intent to reuse the site was implicit in the Tongass Land Management Plan Revision process..

Oly Creek LTF Instead of Crab Bay LTF.

Road over the pass to Oly Creek would need to be constructed.

Haul distance and fuel consumption would be increased, haul season would be decreased—all make for higher cost.

Would need to construct a 8- to 10-acre sort and storage yard near the Oly Creek LTF.

Subsurface investigations need to be completed to determine the feasibility of sheet pile or pipe pile installation. Surface information suggests this is a likely possibility. This would need to be completed prior to LTF design.

Inbetween Creek LTF Instead of Crab Bay LTF.

Inbetween Creek LTF is proposed to be constructed as a temporary low-volume LTF that would require the construction of a larger upland sort and log storage yard

Inbetween site is not acceptable for large volumes timber (see Appendix H, Dive Report).

Road tie with Saltery Bay and Crab Bay drainages would have to be constructed. The haul distance and fuel consumption would be greater and consequently will be more expensive than Crab Bay. Road construction cost increase would be approximately \$1,000,000 not including the haul of 60 MMBF of timber scheduled for Crab Bay LTF which would cost approximately \$640,000 just to haul over this 7.8 miles of road needed to connect Inbetween road system with Crab Bay road system. This does not include taking approximately 48 acres of land out of production for the road way.

Corner Bay LTF Instead of Crab Bay LTF.

There is a physically feasible road route connecting Crab Bay to Corner Bay. The route passes through the Kadashan drainage (VCU 236). The Tongass Timber Reform Act of 1990 allocated the Kadashan to LUD II, essentially roadless (TTRA Section 201). The Act additionally directed studies of the Kadashan LUD II management area (Section 203). LUD II designation allows road construction only on essential transportation corridors. These corridors are those identified as transportation and utility corridors (Alaska National Interest Lands Conservation Act, Section 1102 and Alaska Senate Joint Resolution 40, 1992). The route from Crab Bay to Corner Bay is not a essential transportation and utility corridor. It should be noted that no road has been constructed through a LUD II-designated drainage since the classification was put into place by the Tongass Land Management Plan of 1979.

(ii) the proposed discharge will result in significant degradation of the aquatic ecosystem

This site is well flushed; no evidence of bark was found during the site investigation dive (see Appendix H, Dive Report).

A 100 -meter transect was run from shore seaward revealing the following: Physical attributes of the site are characterized as flat and shallow (4.5 meters at the end of the transect). No evidence of woody debris was noted from past log transfer activities. The substratum was composed of boulder/cobble to about 20 meters from high tideline which graded into a sand/cobble/boulder bottom to the end of the transect. A fairly strong current was flowing west to east and will disperse most woody debris from the area (see Appendix H, Dive Report).

This site would adapt well to the proposed low-angle ramp and rail system with a stacker or loader assist as the natural bottom slope is approximately 9 percent. This method would require the construction of a concrete boat ramp type structure with rails to set the logs at the waters edge via a log stacker or similar type loader. Entry velocity will be controlled and therefore be under 3 feet per second.

This site was originally a steep-angle slide.

Using the above entry system for logs, placing logs into the water, will minimize the discharge of bark and surface run off in to the Aquatic ecosystem.

Surface runoff into the aquatic system will be kept to a minimum by complying with BMPs using filter strips, road sloping, and periodic cleanup of bark and woody debris. (40 CFR 122.27 Silvicultural Point Sources; applicable to State NPDES programs, see 40 CFR 123.25).

(iii) The proposed discharge does not include all appropriate and practicable measures to minimize potential harm to the aquatic ecosystem

This site would adapt well to the proposed low-angle ramp and rail system with a stacker or loader assist as the natural bottom slope is approximately 9 percent. This method would require the construction of a concrete boat ramp-type structure with rails to set the logs at the water's edge via a log stacker or similar-type loader. Entry velocity will be controlled and therefore be under 3 feet per second.

Using the above entry system for logs, placing logs into the water will minimize the discharge of bark and surface run off in to the Aquatic ecosystem.

Surface run off into the aquatic system will be kept to a minimum by complying with Best Management Practices using filter strips, road sloping and periodic clean up of bark and woody debris (40 CFR 122.27 Silvicultural Point Sources; applicable to State NPDES programs, see 40 CFR 123.25).

The reconstruction of the LTF and sort/storage yard at Crab Bay is preferred to construction of the road over the pass to Oly Creek because of subsistence concerns from rural residents of both Sitka and Tenakee Springs. Rural residents from both communities expressed the view that the road over the pass should not be constructed connecting Tenakee Inlet with Hoonah Sound in comments to the DEIS. The same comments were echoed in subsistence hearings in the respective villages. Construction of the pass road is not practicable while meeting the needs of subsistence users.

PROPOSED LTF: INBETWEEN CREEK

Evaluation of Alternatives

(i) There is a practicable alternative to the proposed discharge that would have less adverse effect on the aquatic ecosystem, so long as such alternative does not have other significant adverse environmental consequences

Description

Proposed acres of tentatively suitable harvested under the Southeast Chichagof FEIS Preferred Alternative = 350 acres tributary to this LTF

Acres of tentatively suitable remaining after Southeast Chichagof FEIS = 2838 acres tributary to this LTF. Table 3-5 Southeast Chichagof FEIS.

Alternatives to the Proposed LTF

Road connection to Crab Bay LTF.

No action alternatives of not harvesting timber in the vicinity of Inbetween Creek.

Sub-alternatives at Inbetween Creek for transferring logs.

Low-angle slide. 2/

Beach Bundle lift off as previous permitted. 2/

Evaluation Between Alternatives:

Inbetween Creek LTF

Would not require the construction of 7.8 miles of road to connect with Crab Bay road system. Low timber volume coming out of this drainage makes this entry the most economical LTF. Haul distance, fuel consumption, and soil disturbance would be less than hauling to Crab Bay. Planned as a temporary LTF.

Crab Bay LTF Instead of Inbetween Creek LTF:

Would require the Construction of 7.8 miles (at a cost of approximately \$1,000,000) of connection road without timber harvest. This is not in the preferred alternative.

Haul, fuel consumption, and cost would be higher hauling to Crab Bay.

Inbetween LTF would be a temporary LTF and would be removed after harvest. Crab Bay would be a permanent LTF.

(ii) the proposed discharge will result in significant degradation of the aquatic ecosystem

This site was previously a beach-bundle lift-off site (1985-86).

This site is shallow and logs will have to be stored in deeper water.

A 100-meter transect was run from tideline seaward revealing the following: The physical attributes of the site are characterized as very shallow (2.4 meters at the deepest) with pebble/cobble bottom from the high tideline to 50 meters from shore giving away to sand/silt to the end of the transect. Flushing potential is moderate as evidenced by the presence of silt within the bottom composition (see Appendix H, Dive Report).

An investigation of the exposed reef to the east of the transect indicated that it could be used as an avenue to deeper water which would allow woody debris to settle on less productive bottom habitat. The Forest Service plans to use this reef as the LTF site as recommended in the dive report (Appendix H, Dive Report). Using the reef would lead to deeper water and more favorable site . The reef site is the one preferred upon field investigation.

Deeper water will allow woody debris incidental to this operation to be deposited into the deeper less productive water (Appendix H, Dive Report).

Surface runoff into the aquatic system will be kept to a minimum by complying with BMPs, using filter strips, and periodic site cleanup of bark and other woody debris(40 CFR 122.27 Silviculture Point Sources; applicable to State NPEDES program , see 40 CFR 123.25).

(iii) The proposed discharge does not include all appropriate and practicable measures to minimize potential harm to the aquatic ecosystem

Site would adapt to a low-angle slide off the reef and the facility will be removed when this entry is complete.

Rafting will take place in deeper water.

Surface run off into the aquatic system will be kept to a minimum by complying with Best Management Practices, using filter strips, and periodic site clean up of bark and other woody debris.(40 CFR 122.27 Silviculture Point Sources; applicable to State NPEDES program , see 40 CFR 123.25).

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- 1 Verified by helicopter flight, aerial photo, and map. Beach road with full bench rock cuts anticipated.
 - 2 Verified by field investigation. Southeast Chichagof FEIS.
 - 3 Evaluated in 1978. West side of the Broad Creek drainage site shows broad intertidal area suggests limited feasibility. Sites proposed by APC 7/92 on the east side of both drainages. Investigations have not been made.
 - 4 Subsurface investigation to determine engineering feasibility of sheet pile or pipe pile installation has not been made. Surface information suggests this is a likely possibility.
 - 5 40 CFR 122.27 Silvicultural Point Sources; applicable to State NPDES programs, see 40 CFR123.25.
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